

**THE CONSTRUCTION BRIEFING PROCESS: EVALUATING THE
INFLUENCE OF PERSONALITY TRAITS ON THE PERFORMANCE
OF THE CONSULTANT PROJECT MANAGER**

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Submitted for the degree of Doctor of Philosophy

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September 2011

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ABSTRACT

The briefing process is critical for achieving project success and client satisfaction. It typically involves the consultant project manager co-ordinating the efforts of the demand and supply side stakeholders at the conceptual stage of a project, to identify and define the client requirements. The importance of such early intervention has been highlighted by public sector agencies and professional bodies, leading to the publication of numerous guidance notes and best practice manuals for briefing. Despite such extensive guidance literatures and efforts research shows that current briefing practice is inadequate and a weakness in the construction process. Broadly, the briefing process involves consultant project managers from different background and personality traits. Personality traits are thought of as a pervasive style of thinking, feeling and behaving. The literature demonstrate effective performance relates to an individual's personality traits.

The study attempts to evaluate the influence of personality traits of the consultant project manager on the briefing process. A review of the literature is structured under three chapters; (1) briefing process; (2) consultant project manager role in briefing and; (3) personality traits relationship and influence on performance to introduce a new perspective. It is found that there are correlations between personality traits and effective performance. From the review sixteen traits have been extracted and assessed to be related to the consultant project manager performance in construction briefing.

The investigation attempts to establish the relationships between the 16 traits and the consultant project manager performance, and seeks to determine how each trait contributes to effective briefing. This is explored through observing the consultant project manager in briefing and an industry wide questionnaire survey. As the research focuses on the influence of sixteen personality traits on the consultant project manager performance in the briefing process the data was analysed by the Pearson product moment (correlation) coefficient method to evaluate relationships.

The research concludes that the consultant project manager performance is connected to the

sixteen personality traits dimensions tested and these traits are associated with effective briefing performance. The findings have implications for selecting consultant project managers. The implications of the results of this research, and recommendations for future investigations are discussed.

ACKNOWLEDGEMENTS

First and foremost I would like to thank my supervisor, Dr Graeme Bowles for his untiring support and supervision of the thesis. His support and advice have been invaluable for my preparation and development. In particular, his patience and guidance in taking me through all the pitfalls and pointing the way towards the new research perspective that underpins this thesis. Special thanks go out to all the practitioners, assessors and companies who have participated and assisted in recording information in the empirical studies, which formed part of my research. This fieldwork would not have been possible without their support. I am also grateful for their willingness to co-operate and participate including the patience displayed during the interviews. The time generously set aside and for the contributions they made to my understanding of briefing practice and personality influence cannot be overlooked.

I would also like to thank all those who provided the contact details which afforded me the opportunity to interface with key participants successfully during the case study and across site observations. In particular may I thank Anne Armston (School Office Administrator) for her kind assistance in providing all stationery to facilitate mailing and receiving questionnaires' responses. Thanks to my other friends who assisted in many ways throughout the thesis. Finally, special thanks are reserved for my wife and children for their tolerance, without their support and encouragement it would have been impossible to undertake and complete this PhD study.

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Chapter 1 Introduction

1.1 Introduction to the thesis

The purpose of this chapter is to introduce the thesis that seeks to explore the relationships between personality traits and performance, and the influence of personality traits on the performance of the consultant project manager (CPM) in delivering effective construction briefs, thereby providing a roadmap for the reader to achieve a full understanding of the work. Initially the rationale for the research is presented. In this section, the importance of the briefing process for the successful delivery of projects in the construction sector and the problematic issues relating to its implementation, effectiveness (in current practices) and personnel involvement are introduced in order to identify the need for the research.

Following the rationale for the research the aims and objectives are stated to indicate the direction of the research. Consideration is given to the approach to the literature review in order to map the process to reflect the three key strands which provide the foundational insights to the research. As a consequence of the review findings a new perspective on construction briefing is introduced which links performance to personality traits. Because personality is a valid predictor of occupational performance (Hogan and Holland 2002) the new perspective is framed around the influence of personality traits of the consultant project manager on performance in the briefing process to indicate that performance is particularly linked to personality traits which influenced effectiveness.

In this research the justification for selecting the consultant project manager as the focal point of the briefing process in preference to other professionals (for example, architects) who traditionally managed the process is presented. Further, in the context of this research, the consultant project manager (CPM) refers to the project manager engaged by the client(s) to coordinate and manage the briefing process, thereby

fulfilling a role which is independent of the client organisation. This involves interacting with client and other key stakeholder to identify and define the client requirements (CIB 1997; Mastrandrea 1986). These requirements are established by the client which becomes the medium for measuring and evaluating the consultant project manager performance, and when achieved to the satisfaction of the client the process is deemed effective (Bowen 1997; Shen et al. 2003). Client satisfaction is therefore a key performance indicator.

Particularly in the process, the consultant project manager is the central figure who takes ownership of the process of gathering, analysing and synthesising information for the development of the brief. It is from this document (brief) everything else flows, including the manner in communicating the project specification to the design and construction team.

Leading researchers have established links between personality traits and construction professionals' performance (Atalah 2009; Hartman 2008). Barrick and Mount (1991) contended that an individual with specific personality traits is likely to perform effectively when matched with the task requiring of those traits. These findings are important for this study which seeks to identify the consultant project manager personality traits, with an emphasis on understanding the relationship between the traits and their influence on performance in the briefing process.

Consideration is then given to the key components of research in the form of the research design to introduce the research purpose, the research conceptual context, research questions, research methods, and research validity to give the research the forward thrust. Finally, for scholarly completeness, the thesis structure is outlined in order to indicate the stages through which the thesis has progressed to its completion, while indicating the data derived and analysed.

1.2 Rationale for the research

Briefing is the process by which client requirements are identified, clarified and articulated in the early design phase of construction projects (Yu et al. 2008). The process is crucial for obtaining successful construction project as well as to the satisfaction of client (Shen et al. 2004; Yu et al. 2005). The better the briefing process the better and more accurate are the results (Morrison 2003). However the briefing process has a long history of problems with its implementation and ultimately its effectiveness, and though essential for the successful delivery of projects and clients satisfaction, it is widely acknowledged the process needs improving (Shen et al. 2004; Bouchlaghem et al. 2000) and this has been noted for some time as a main issue (Bowen et al. 1997). Many problems in construction projects can be traced back to briefing (Yu et al. 2008).

Over the past decades considerable efforts have been devoted by researchers and practitioners to improving the process (Yu et al. 2008). These efforts have resulted in the development of many guides and best practice, including academic discussions and strategies (OGS 2008; Yu et al. 2008; CIB 1997; Yusuf 1997; Salisbury 1990; O'Reilly 1987; Morris et al. 1987; Goodacre et al. 1982; Newman et al. 1981; RIBA 1973). Strategies which are identified in the work of many contemporary authors such as Shen, Kamara, Anumba, Evbuomwan *et al*, and this includes establishing suitable frameworks to address the limitations in identifying client requirements. For example, Shen et al. (2003) in describing a briefing framework, proposed the integration of value management methodology with functional analysis system techniques (FAST) and functional performance specification (FPS) to enable client organisation and project team to systematically identify clarify and clearly represent client requirements in the briefing process. The approach is comprised of four interrelated phases; namely preparation, information, analysis and evaluation.

Kamara et al. (1999) implemented a new approach using quality function deployment (QFD) designed to address the deficiencies in current briefing practices, as

well as satisfying requirements processing in a concurrent life-cycle design and construction. It is based on a client requirement processing model (CRPM) which employs the quality function deployment technique. In addition, they proposed an approach within a concurrent engineering framework to assess the suitability of the current briefing practices. The concept is premised on concurrent engineering for integrating the construction process, where its implementation in the industry requires an adequate assessment of existing practices to determine the kind of processes and tools to be developed (Kamara et al. 2001). This framework is focussed (primarily) on the briefing stage in the construction process to elicit and represent client project objectives, and to determine whether the current practice of briefing is adequate within a concurrent engineering framework for design and construction, since it was established that current practices are not adequate.

Blyth and Worthington (2001) argue for briefing to employ a discrete and continuous process to greatly enhance the prospect of capturing client requirements. This perception assumes that the consultant project manager following a prescribed method would enable the client requirements to be identified in clear and unambiguous terms prior to any formal design action. The present literature still makes this assumption and advocates its development in terms of client requirement management (Kamara and Anumba 2001).

Interestingly, Barrett and Stanley (1999) identified briefing as a persistent problem area in the construction industry and described a research project aimed at improving the briefing process. The proposed technique evaluated good practices in briefing, where the limit of rationality has been derived from a grounded theory. The initial results indicated that the issue is not simply a matter of good practices not being implemented, but one involving human dimension. Further they examined twenty reasons for briefing failure (or ineffective briefing outcomes) and still concluded that the human element is often at the root of briefing failures. The human dimension often refers to individual's understanding of the client requirements which plays a significant

part in determining the approach to be adopted for identifying the client project requirements. As such the impact of people's thinking upon the briefing process and what influence interpretation of the issues warrants greater scrutiny (Barrett and Stanley 1999).

Despite the attention and effort devoted to improving briefing (practices) many researchers suggest there is limited success, and current practice is considered inadequate, full of limitations and lacks justification of client value requirement within the industry (Yu et al. 2008; Shen et al. 2003; Kamara et al. 2001; Green 1996). It is still regarded as one weakness in the construction process (Barrett and Stanley 1999). According to Hardcastle and Tookey (1998) the construction briefing process is fraught with difficulties and an unresolved problem for the construction industry. Baldwin and McCaffer (2000) contended the briefing process is one of the priority areas for improving its effectiveness. Importantly, these problems have been reported extensively through the years in such documents as the Banwell report (1964) later, in the Latham Report (1994) for various government and governing authorities.

Broadly, the briefing process involves the consultant project manager, architect, and other demand and supply side stakeholders interacting to identify and define the client requirements accurately (Yu et al. 2006). Recent trends suggest clients have been engaging the service of consultant project manager for the briefing process, moving away from conventional practices of using architects or in house project manager, because of the conviction the consultant project manager brings an unbiased perspective and new skills to the process (CIB 1997; Mastrandrea 1986). The consultant project manager coordinates the efforts of the stakeholders, and whereas the ideas from the client shape the design, the consultant project manager influences and shape the outcome of the process and brief (O'Reilly 1987).

Because briefing is an industry wide practice and key to the success of projects, many consultant project managers would be involved in conducting briefing across the

sector. It is therefore logical to assume performances across projects will vary owing to individual differences (Boeree 2006). The consultant project manager who initiates develops and sustains relationships between all stakeholders will have personality traits that distinguish him (her) from others, because of individual differences (Hartman 2008; Boeree 2006). These traits are also likely to make him (her) either suited or not for working with the client to identify the project requirements. Personality traits difference underpins performance and can shift the focus away from identifying the requirements of the client and contribute to ineffective briefing practices (Barrett and Stanley 1999). Yet in the construction management literature there are few published work about the personality traits of the consultant project manager (Atalah 2009) and in particular, there is almost no literature about the traits of the consultant project manager and their influence on performance in the briefing process, though the human dimension is often at the root of briefing problems (Barrett and Stanley 1999). In particular our understanding of how personality traits of the consultant project manager influence performance in the briefing process is limited.

Personality traits are thought of as a pervasive style of thinking, feeling and behaving and act as a good measure for analysing the factors influencing the consultant project manager performance (Mahlamaki 2010). Researchers generally accept that personality is well correlated with job performance (Thal Jr and Bedingfield 2010; Salgado 2002; Barrack and Mount 1991; Tett et al. 1991).

It is generally accepted that individuals action are defined by the five factor dimension of traits {or five factor model (FFM)} and their facets, though argument suggest traits defining performance extends beyond these dimensions, especially since traits are defined by the lexical language to suggest our actions are adequately summed up under taxonomies of personality, which can correlate with performance in job situation (Costa and McCrae 1992; Goldberg 1990). This understanding is supported by the findings of many researchers who found a strong link (correlation) between job performance and specific personality traits of construction management professionals,

such as project managers, consultants, architects and surveyors (Atalah 2009; Hartman 2008; Sheldon 2004; Carr 2000) though studies on the influence of the consultant project manager personality traits on performance in briefing is unknown. Barrett and Stanley's (1999) recommendations suggest there exist a necessity for such understanding.

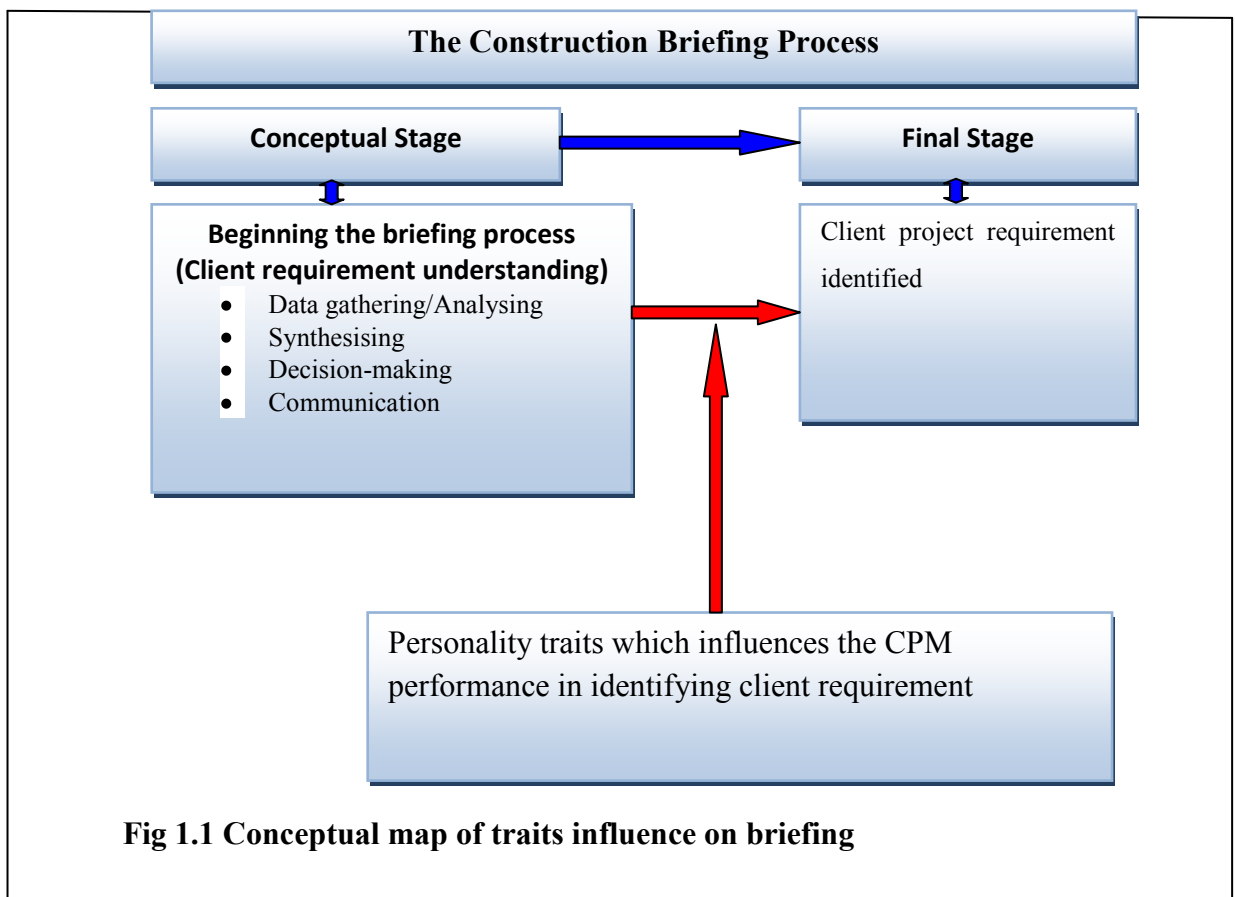
The development of my proposal therefore evolved from my interest in investigating the relationships between personality traits of the consultant project manager and performance in the briefing process and the extent to which these traits influence effective performance and ultimately the briefing. This involves determining relationships between personality traits and task performance to link the two variables in the process, especially since our understanding of how the consultant project manager personality traits influence effectiveness has received little attention.

One of the major contradictions of on-going studies on the briefing process is the often critical stands taken in comparing each other, and every so often one of the common criticisms is that the briefing approaches developed and recommended rarely have direct applicability in practices. It also reflects the personal undertaking of the consultant project manager (Barrett and Stanley 1999; O'Reilly 1987), based on the understanding of the client requirements (Barrett and Stanley 1999) which further adds to the complications (Kelly et al. 2005). Therefore our understanding of the relationships between the consultant project manager personality traits and performance in the briefing process can serve to guide the client in engaging the consultant project manager with the traits related to effective performance. This finding can also enrich the academic discussion on improving current briefing practices.

1.3 Research - Aim and Objectives

1.3.1 The Aim:

The aim of this thesis is to evaluate the influence of personality traits of the consultant project manager on performance in the briefing process. The study therefore explores the briefing process to investigate the relationships between traits of the consultant project manager and performance, for an understanding of how and to what extent personality traits impact on the effectiveness of performance in key areas of the process, illustrated in fig. 1.1.



1.3.2 Objectives

Because the research interest in this study is the performance of the consultant project manager in the briefing process as a consequence of personality traits influence, establishing relationships between performance and personality is an essential step toward determining influence (Naoum 2004) and so key to this is the understanding of current day briefing practice, primarily the approach adopted in carrying out the tasks involved, and the traits of the consultant project manager which influence effective performance to the satisfaction of the client. As such the aim is translated into the following linked objectives:

- To define the briefing process and conventional approaches adopted by consultant project managers in preparing the brief.
- To evaluate the key tasks performance areas in construction briefing.
- To identify the limitations (and consequences) of construction briefing practices leading to client dissatisfaction.
- To understand the consultant project manager involvement and roles in the construction briefing process.
- To identify and determine relationships between personality traits and performance of the consultant project manager performance in construction briefing and evaluate influence on the process.

1.4 Mapping and prioritising the areas of the literature review

The research was approached through an initial literature review, pilot study, case studies and a questionnaire survey of the construction industry. Details of the approaches to the pilot study, case study and questionnaire survey are developed further in Chapter six.

The literature review provided the theoretical background of the research and is

hinged on three major areas, namely: the briefing process, the consultant project manager involvement in briefing and personality traits influence on performance in the briefing process. It is structured in this way to highlight these key areas (fig. 1.2) thereby laying the foundational material and provides a holistic perspective for introducing a new perspective on the construction briefing process, which is underpinned by personality traits.

In the first part, the review looks at the briefing process to highlight a process which involves several activities and different personalities interacting to identify and define the client project requirements. It is contended the failure of the briefing process results in poorly defined project requirements and this limitation leads to poor projects (performance) and client dissatisfaction. This is well acknowledged in the industry (Bouchlaghem 2000; Bowen et al. 1997). The second part reviewed the literature on consultant project manager involvement and roles in the briefing process, where the focus is on the essential indicators of performance to measure and evaluates effectiveness. Finally the third part of the review evaluated personality and performance relationships extensively. The focus was on the influence of personality on performance, especially the five factors dimension, their facets, and other traits construct, extending beyond the main dimensions , to anchor the development of a list of traits (inventory) to be able identify those associated with the consultant project manager in the briefing process.

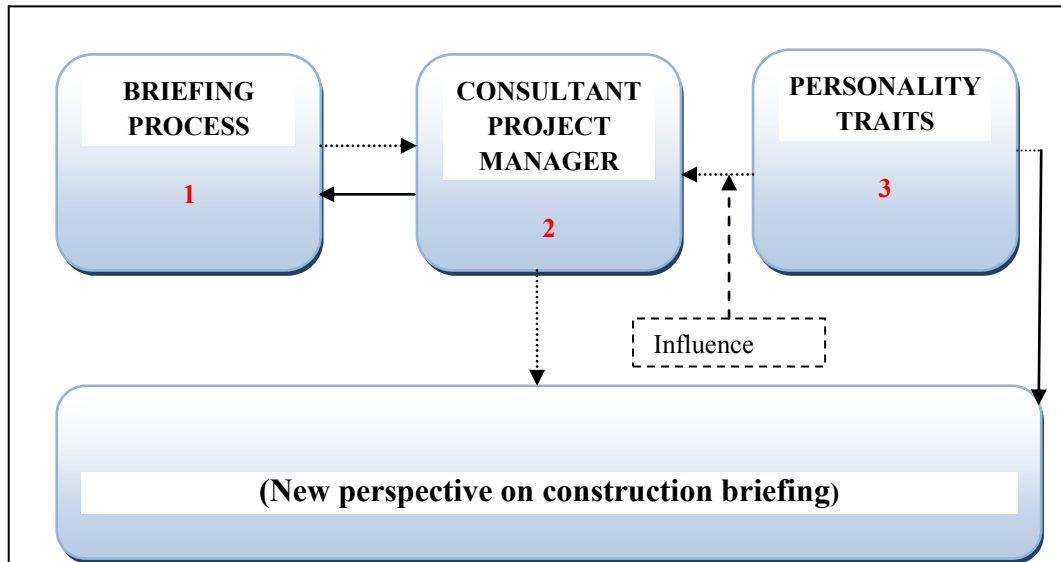


Fig 1.2 Conceptual framework of literature review

1.4.1 The consequences of ineffective briefing process

The ineffectiveness of construction briefing accounts for significant levels of client dissatisfaction (Bowen et al. 1997) costing billions of dollars to the industry to demolish building because they did not satisfy client's requirements (Yu et al. 2008; Shen et al. 2004).

It is axiomatic of construction briefing that the process may be regarded as effective or successful if the client requirements are identified and defined at the right time, at the appropriate cost and quality, to the satisfaction of the client. Essentially this is linked to the success in carrying out the tasks involved in the briefing process, for example data gathering, analysing and synthesis for decision-making and implementation (Yu et al. 2008). Increasingly, the successful achievements of these

tasks have been associated with the performance of the consultant project manager, whose involvement is considered essential for an effective outcome (Barrett and Stanley 1999). But with current practice often construed as ineffective, in that, it fails to identify the client project requirements on a consistent and sustainable basis, is cause for concern (Shen et al 2003; Kamara et al. 2002). Such issues greatly affect project delivery, cost, quality and performance, but more particularly it is a reflection of the performance of the consultant project manager to effectively undertake the key tasks, including understanding and defining the client requirements and develop the brief (Shen et al. 2006; Bouchlaghem et al. 2000; Latham 1994; Mastrandrea 1986).

It is established that the briefing process involves different personalities (Yu et al. 2008). The process generally revolves around teamwork and good interpersonal relationships (Construction Excellence 2004). Because of the involvement of the different personalities, the research is exploring the briefing process to investigate personality traits impact on the consultant project manager performance specifically, on the basis that the construction industry is yet to exploit this important area for potentially improving the briefing process. From researching the literature on the briefing process improvement strategies, the techniques advanced were often limited to a consideration of prescriptive guides and methods. There is the absence of a direct link of the performance of the consultant project manager to personality traits in the briefing process. This leads to the question of: how and to what extent personality influence permeates the consultant project manager performances and the briefing process?

The catalyst is the challenge to identify the traits of the consultant project manager, which are related to performance and the influence on current briefing practices, to contribute to the academic discussion on improving briefing. In evaluating personality traits this research is advancing the proposition that the first step to improving the effectiveness of briefing practices is to employ the consultant project manager with the personality traits which enhances effective performance to conduct the process.

1.4.2 The consultant project manager and construction briefing

The use of the consultant project manager in the briefing process is generally based on the client's desire for the solution to a problem (Schein et al. 2002). This means engaging and agreeing to specific contractual arrangements, including specific terms of reference and in the circumstances of the briefing process, identifying the client requirements thereby delivering a comprehensive brief. O'Reilly (1987) contended that the consultant project manager is important for influencing the direction of the briefing process. Mastrandrea (1986) stated there appears to be a universal principle which provided the rationale for the consultant project manager appointment: "he or she is the means by which the client secured that which he (she) wanted from the particular construction project". In making a distinction between the consultants project managers in preference to the in-house project manager, Mastrandrea (1986) contended that the consultant project manager brings new insights and skills and makes the decisions that would enables him or her to capture the client project requirements. To the clients, the consultant offer unique solutions drawn from their experience and knowledge gained from working with other clients on similar projects (Mastrandrea 1986). A criticism of the consultant project manager is the often-unstructured approach to collecting client requirements due to a lack of focus, and confusion over whom is responsible for particular activities. Kuhn (1982) contends that such dynamism and variations are impacted by individual differences, influenced by personality traits (Boeree 2006).

The involvement of the consultant project manager at the critical project briefing stage is essentially to pursue a path which offers the best means to achieve the project goals (Clark 1990). According to Schein (2002) there is also a deeper connotation which suggests helping the client and because the consultant project manager is coming from outside the company the possibility for shaping and influencing the effectiveness of the process is greatly enhanced (Construction Excellence 2004; O'Reilly 1987). Such rationalist expectation is based on the assumption that the consultant project manager

possesses the skills to enable him or her to understand the client requirements and deliver a final brief which the project specification to be communicated to the design team, while meeting the expectation of the client organisation (Shen et al. 2006; Kamara et al. 2001; Mastrandrea.1986).

Ideally the clients would wish to engage the right consultant (project manager) to deliver an effective brief through optimum performance. The selection of a consultant project manager with the right traits should take place before the process begins to enhance the probability of achieving success (O'Reilly 1987). However, in reality the consultant project managers are coming from different backgrounds, with different personality traits to contribute to a set of unique circumstances that can complicate the process. Such issues should not be ignored. The important factors of personality influences which play a role in optimizing performance should not be overlooked either, because this can lead to major consequences (Korzaan and Boswell 1992). As such to minimise these possibilities or pitfalls many organisations, both large and small are employing traditional personality trait measures to predict performance and to identify suitable candidates for job requirement (Shelton 2004; Edwards and Abbott 1973).

1.4.3 Personality traits and the briefing process

Personality traits and influence on performance plays a major part in this study. The concept of traits influencing individual performance is not new. The link to performance in the construction environment has been present (Atalah 2009; Hartman 2008; Carr 2000), but its influence on performance in construction briefing has been a source of considerably ambiguity.

There are many different personality traits that can be observed and directly impacts on performance (Using Personality Assessments to Hire Employees 2006). One of the key aspects of the consultant project manager roles in construction briefing is

decision-making (Mastrandrea 1986). This may poses no problems when all applicable information is at hand, however personality traits define the way the consultant project manager interact with other to arrive at decisions. According to Baker (2008) personality traits will influence the process. In many studies the big five dimensions are regarded as highly relevant to defining individual performance, and it is likely the construction briefing process is influenced by personality trait. A strong relationship between performance and traits is indicative of the dependence of the dependent variable on the independent. However in recent studies researchers have advocated a search for other traits beyond the big-five dimension that underpin performance, since influence extends beyond the big five dimensions (Judge et al. 2007).

Costa (1996) contended personality traits are an indication of one's unique organisation of thoughts, feelings, and behaviour combined distinctly in each of us to define and determines our pattern of interaction within an environment, and whereas Hoekstra (1993) contend these are the distinguishing qualities or characteristics of an individual, they implies a readiness to think or act in a specific way in response to a variety of different situation. The process of briefing requires careful thinking and assessment, as such it is likely personality traits will influence the outcome. These traits which are identifiable, observable, measurable and rateable (Matthews et al. 2003; Hills 1992; Abbott 1973) will explain how the consultant project manager will achieve the goals of the briefing process (Shelton 2004; Carr 2000; Barrick and Mount 1991).

This research holds the view that the dimension of the consultant project manager personality traits will be significant variables impacting on performance in the briefing process and ultimately the outcome of the briefing process.

Mastrandrea (1986) noted the significance of personality traits on the performance of the consultant project manager, and Scholarly work in the 1960's established such links, postulating that performance and personality characteristics are "inherently intertwined"(McCrae and Costa 1992).

Specifically, other studies more directly linked to the construction industry have attached greater importance of personality trait influence on performance and selection and these include work of Shelton (2004), Carr (2000), Stanton and Matthews (1995) related to the Engineering and Construction sectors.

For example Carr (2000) found that there is a correlation between personality traits and construction professional performances in team settings, and suggest that those participants who have diverse personality traits are very useful during the conceptual and schematic phase of a project.

Shelton (2004); Johnson et al. (1998); Blickle (1996); Costa (1996); Barrick et al. (1993); Stanton and Matthews (1995); Funder et al (1987) also found that there are correlations between personality traits and performances measure in the construction industry. These have assisted greatly in selecting or predicting individuals suited for work in the construction environment because of the relationships between personality traits and job performance.

More specifically and directly related to this research is the findings of Atalah (2009) and Hartman (2008) who found that there is a relationship between personality traits of the project manager and construction management professionals respectively and performance. For example, Hartman (2008) identified the personality traits of exceptional construction project manager in a study of project managers over a period of 15 years. He observed these managers operating in various roles and noted their personality trait profile in specific job circumstances. He found that the exceptional project manager were good in a number of performance areas, and display traits such as problem solving, communication.

On the other hand Atalah (2009) used data from a pre-employment test, using face to face observation techniques. He found that construction management professionals have distinctly different personality traits from other professionals in the industry.

However though these studies found a relationship between personality traits and performances (the project manager and construction management professional respectively) they have not specifically looked to identify the personality traits of the consultant project manager, which are related to his or her performance and which can contribute to delivering effective briefing. This is the centrepiece of this research.

If a reliable indication of performance is a function of personality traits, and can be identified or predicted, then logic follows that the consultant project manager performance can be expressed as a function of his or her personality (Carr 2000 citing Kichuk and Wiesner 1997). Suffice to say that the way an individual interacts with others is a function of both his and her character and decision making qualities which are indicative of his or her personality traits (Fillip et al 2001). Since the research focuses on identifying the personality traits and evaluating influence on performance, then the personality traits identifiable can be statistically analysed and it is possible to predict and relationships between traits construct and performance (Romer and Revelle 1984).

There are Psychometric instruments and techniques employed to measure and rate personality traits of individuals (Myers-Briggs Type Indicator; Edwards and Abbott, 1984). Such techniques include direct observation and rating traits on a Likert scale (Hills 1992; Romer and Revelle 1984) including self-rating and peer rating assessment by questionnaires (Naoum 2004; Fraser 2000). Studies have shown that these instruments are valid and the analysis bears high correlation of data (Shelton 2004; Carr 2000). In the research the process will be carried out through the administration of direct observation and rating techniques supported by an industry wide questionnaire survey where respondent will self-rate them.

This will enable special attention to be paid to this area in order to ensure an effective briefing process is attained. It is often contended that every consultant project manager would not always match up to the high standard of proficiency in the briefing

process given personality profile make up (Greiner and Ennsfellner 2010; Blickle 1996). Taking these factors into consideration then the rationality to forge ahead to outline personality traits influence on performance is advanced.

The scarcity of research in this area is regrettable because it is the sort of evidence the industry, academic and practitioners requires if answers to the weakness and limitation of the briefing process are to be advanced for the benefit of improving the process for the industry. The gap in knowledge is readily addressed by incorporating the perspective of personality theory towards more of how personality traits can inform an understanding of the consultant project manager performances in the briefing process

1.5 Research design

This research has embraced a qualitative research strategy, which involves observing the consultant project manager briefing practice and identifying the traits which define performance to facilitate the analysis of relationships between performance and personality traits to evaluate influence on effective briefing outcome. It is designed to achieve the aims and objectives of the research and therefore focuses on gaining first-hand information about the consultant project manager personality at the construction project briefing stage. Measurement is very important to get beyond the purely subjective and to the more objective assessment in the social sciences, where interest in other fields is created to investigate the applicability of qualitative analysis.

The construction sector have been employing trait measurement techniques (Atalah 2009; Hartman 2008, etc) to determine selection and performance of professionals. This has spawned powerful support and interest in both academia and industry to such extent that there are many studies which researched the influence of personality traits in different setting in organizations activity (Sodiya et al. 2007; Dvir 2006; Shelton 2004; Johnson and Singh 1998).

The current investigation began with an interest in qualitative research and empirical studies, which led to the discovery of the studies on individual difference in personality traits of construction management professionals (Atalah 2009; Hartman 2008).

In these studies the focus was on such issues as personality traits and performance (Atalah 2009; Hartman 2008; Barrick and Mount 1991; Bostrom and Kaiser 1981) which led this research to investigate personality traits of the consultant project manager and influence on performance. Consequently, this research addresses the relationships between sixteen personality traits of the consultant project manager and effective briefing performance.

Following the line of qualitative inquiry (Naoum 2004; Creswell 1998; Maxwell 1996) illustrated in the road map (fig 1.3), five key stages of the research are explained. Primarily, these stages show the integrated relationship of the research through its development stages, which are as follows: - the research purposes, the literature review in context, research questions, research methods, and research validity.

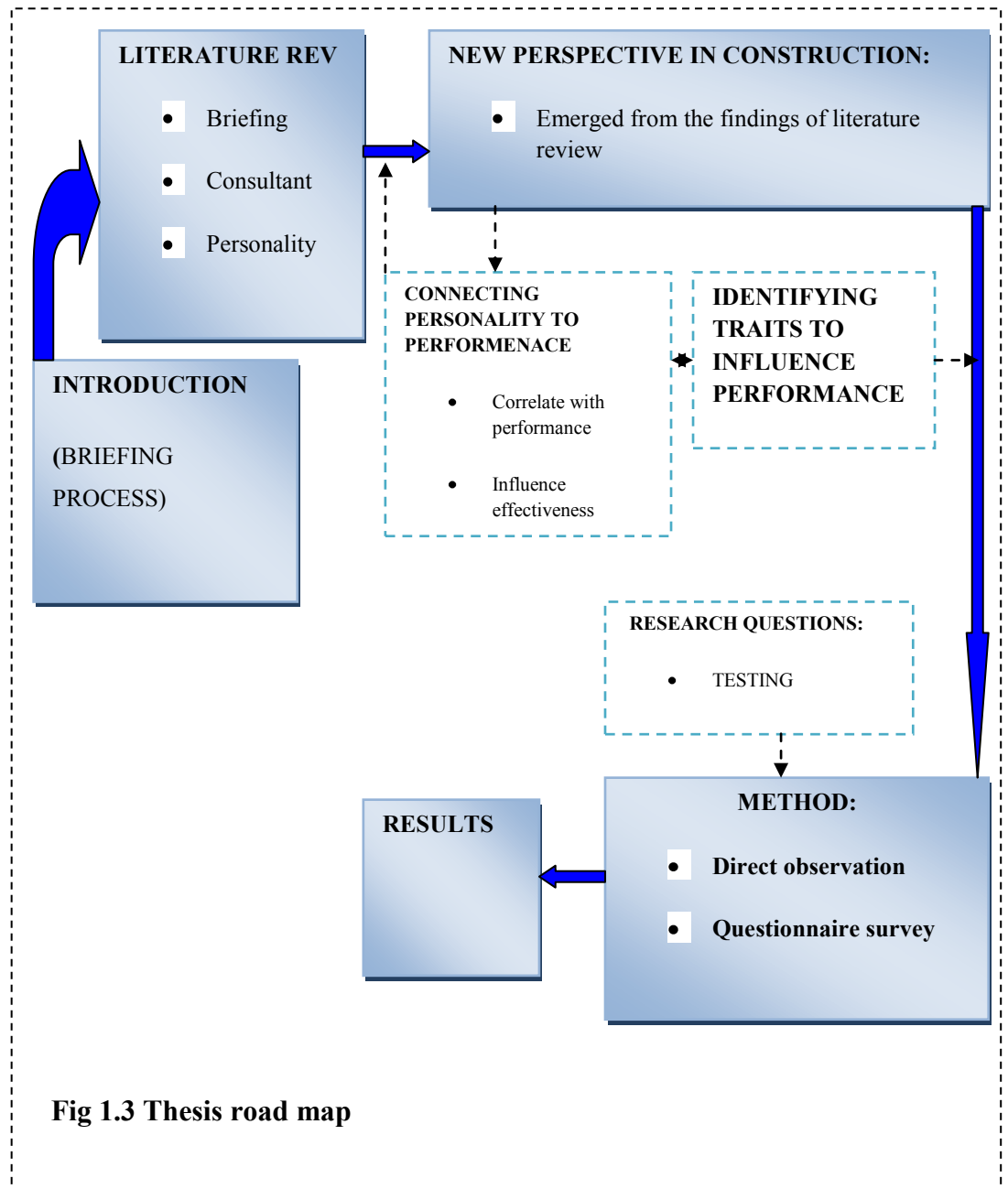


Fig 1.3 Thesis road map

1.5.1 Research purpose

The purpose of this research is to investigate the theoretical basis of the briefing process in order to offer new insights by exploring and evaluating the influence of personality traits of the consultant project manager on performance in the process. The introduction of this new perspective will also provide a basis to offer improvements to current briefing practice. The goal is not only to investigate the relationships between personality and performance to evaluate influence on the consultant project manager performance in briefings, but also to propose an alternative perspective which recognises the impact of personality traits on performance, thereby enhancing understanding of personality influence in briefing. Such understanding is expected to ignite wide interest with the potential for personality trait to influence the effectiveness of briefing process outcome to become widespread, especially in the key improvements area of the process, thereby providing a base for improving the process.

In other words, the research is introducing a new concept that is theoretically rigorous and provides sound reasons for practitioners to take a holistic view of the briefing process, including the consideration of factors such as personality traits for improving the briefing process. The introduction of the new perspective therefore represents a paradigm shift from the conventional approaches of establishing best practices and guides to looking at innovative ways which takes into account the nature personality influences on performance in the briefing process.

1.5.2 The literature review in context

To advance the concept, current practices are reviewed to focus on understanding key strands of the process, including the limitations and the consequences of the process failing to achieve client requirements. As such a suitable research strategy and technique for identifying the traits which influence the consultant

project manager performance in the briefing process these are introduced. For the purpose of introducing the new perspective, reference is made to work of various researchers in the personnel psychology field, since they have engineered aspects of personality traits and influence on performance (Barrick and Mount 1991; Carr 2000). Reference is also made to the various personality dimensions which are related to performance, for example the Big-Five or five factor personality dimensions are referred. Specifically personality traits of construction management professionals (Atalah 2009; Hartman 2008), the NEO-PI-R five factors and thirty specific traits (Costa 1996) especially defined by the lexical traits description and their applicability and influence on performance of the consultant project manager in the briefing process are also referenced. The justification of the consultant project manager as the focus of the briefing process will be examined within the context of personality traits.

1.5.3 Research questions

The key research questions are developed in terms of three types of understanding of the issues relating to traits of the consultant project manager and impact on performance in the briefing process:

- **Descriptive question:**

- How do personality traits related to influencing performance in current day briefing process?

- **Interpretive question:**

- What are the relationships between personality traits and the consultant project manager performance in carrying out the key tasks in construction briefing process?

• **Theoretical question:**

- How can the effectiveness of the briefing process be improved to the satisfaction of the client from the perspective of personality (theory) trait influence?

1.5.4 Research methods

In order to seek answers to the research questions, the adopted philosophical position is located within the interpretive paradigm. Correspondingly, the research will follow the principles of naturalistic inquiry, because under the traditions of the qualitative research paradigm, the research will adopt strategies of phenomenological study, a case study and across site observing briefing practices to design three research techniques for data collection and analysis. Specifically, these three research techniques will be designed as direct observation in a natural settings (a case study and sitting in on briefing process across the industry) supplemented by interviews and an industry wide questionnaire.

1.5.5 Validity

In the light of the naturalistic inquiry, the research's strategy was based upon specific sample of the construction sector for direct observation of the consultant project manager in a case study projects and in other briefing project across the industry. Further a questionnaire survey was conducted, specifically directed to the industry construction professionals with experience in the briefing. They were asked to respond to issues relating to personality traits and influences on performance.

1.6 Research scope

The scope of the literature research is primarily confined to briefing process; specifically the fieldwork is confined to the UK building sector on all sizes of building. It refers to the UK construction industry practitioners as consultant project managers and clients, and argues that the personality traits profiles identified will adequately reflect the profiles of the consultant project manager in the construction sector. Consideration is given to the conceptual stages of project development, which are concerned with the practice of the consultant project manager to understand and identify client requirements within the context of the project process.

In particular, attention is given to the consultant project manager for achieving a common understanding of trait influence on practice. Issues relating to pre-evaluating the consultant project manager suitability based on traits profile for the briefing process fall outside the scope of this research. The research seeks primarily to identify the traits associated with the consultant project manager performance in the briefing process and having done so, will seek to compare then with the traits of the consultant project manager in project planning and implementation.

In this research, the term 'client' refers to an individual or organisation that embarks, or considering embarking, on the process of commissioning a building project. Clients frequently include a number of diverse stakeholders, whose conflicting interests and needs have to be understood and identified before any brief can be finalised. On the assumption that the basic principles are similar, the research attempts to uncover the whole range of personality traits profile which influence performance in all project and building types.

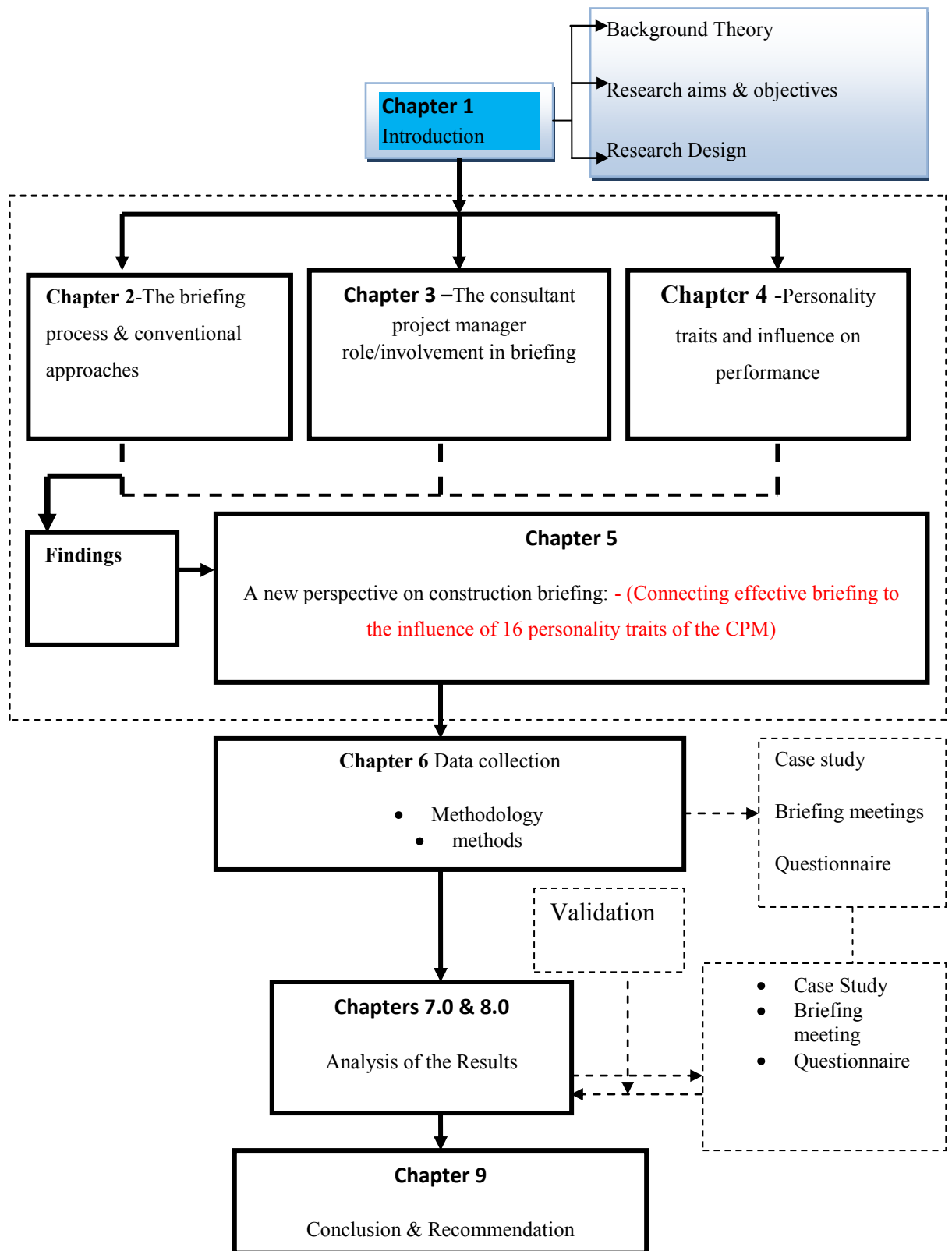
The coverage aims to provide a sound basis for understanding personality traits, which influence performance of the consultant project manager in the briefing process. Therefore, influence of personality traits on the performance of the other participants in the briefing process falls outside of the scope of the study.

1.7 The thesis structure

The thesis is structured into nine chapters (fig 1.4) in two sections. *Section-one*, the Literature review was built on conceptual theories by an extensive review of the literature on the conventional briefing process, the consultant project manager involvement and role in the briefing process and the influence of personality-trait of the consultant (project manager) on performance in the briefing process. Emerging from the literature review the new perspective which propagates evaluating the influence of personality traits of the consultant (project manager) on performance in the briefing process is advanced.

Section two includes the empirical studies on the process of evaluating the influence of personality traits on the consultant project manager performance in current day practice. The evaluation and examination is conducted at every facet of the briefing process, by observing the consultant project manager. The use of a case study of the briefing process adopted by an organisation, with the support of across-site direct observation of consultant project manager conducting the briefing process in other client organisations and a questionnaire survey essentially validates the imposition of the new approach, which proposes the evaluation of personality traits to be discussed. Ultimately, the analysis of the data from the case study, across site observation, interviews and the industry wide questionnaire survey provides supporting evidence for the evaluation and reports on the influence of personality traits on the consultant project manager in delivering an effective briefing process. Preceding these are the essential issues of the rationale for the research, the aims and objectives and the research questions to set the thesis in context.

Fig 1.4 Thesis structure



1.7.1 Section one. - The theoretical and conceptual perspectives

- **Chapter 2.0 the briefing process and conventional approach**

The chapter defines the briefing process and conventional practices by means of the extensive literature review. The literature is reviewed in detail and specific themes which form the foundation of the briefing process, for example; (i) the brief and the briefing process, (ii) the procedural stages to identifying client requirements (iii) relationship between client and consultant project manager (iv) briefing practices and variations (v) briefing limitations and better practice methods, are identified to address the concerns of current day briefing practice:

Drawing from the literature so far has discerned that most of the process limitations coincide with a failure to adequately identify and define accurately and clearly client requirements. Evidently, different individuals, for example the consultant project manager and other demand and supply stakeholders, are involved in the briefing process, and therefore from the standpoint of individual difference owing to personality traits (Boeree 2008) and how these factors influence performance in the briefing process nothing is said, though traits points to some of the reason for varying performances which can also contribute to some of the process limitations in identifying client requirements. As such (in a holistic way) a broad understanding of the consultant project manager practice in the briefing process is presented.

- **Chapter 3 the consultant project manager role in briefing**

This chapter aims to review the consultant project manager involvement in the construction industry with a focus on the briefing process. Specifically the review focuses on the consultant (project manager) role in a management consultant capacity to evaluate his practices. As such the review evaluates the essential benefits to the client

by engaging the consultant project manager, consequently the problems of briefing failures are looked at specifically for linkages to the consultant project manager practice. At the outset specific themes relating to consultancy, consultant traits, and attributes, effects of traits on project briefing and success, academic interest in consultancy, and the consultant (project manager) role will be reviewed.

The review also points in the direction of the consultant project manager as a professional from a multidisciplinary consultancy who embraces a construct in an independent capacity (Clark 2000), and while performance is influenced by traits characteristics, it is imperative that these characteristics, including attributes of the consultant project manager are looked at from the standpoint of effect on briefing outcome. The review also explores the softer skills of the project manager to highlight the importance of these skills for managing the briefing process effectively.

Finally, as part of the overall strategy the review examines the broader picture of the consultant project manager involvement in briefing for an understanding of impact on improving the effectiveness of the briefing process. The review contends that successful consultants (project manager) are judged by their overall impact of their roles, and although they are expected to do an exceptional job, this is only possible if they possess the personality trait to match the tasks requirements which influence performance, especially as it relates to the acquisition of crucial information to support the credibility of their findings.

- **Chapter 4 Personality traits influence on performance in the briefing process**

This chapter evaluates the literature on personality traits in order to develop a new perspective on the briefing process. It specifically reviews personality and performance to highlight the connection between effective performance and personality traits

influence. Particular attention is given to the nature of the big five dimension and other facets of traits to establish connections between the consultant project manager personality, the big five dimension and performance in the briefing process. These aspects are argued to be highly relevant to the consultant project manager practice (performance) in the briefing context and provide the theoretical rigour for briefing improvements.

- **Chapter 5 a new perspective on construction briefing**

Specifically this chapter aims to draw from the findings of the preceding chapters to propose the case for evaluating the influence of personality traits of the consultant project manager on performance in the briefing process. The new perspective explains performance from a personality perspective to highlight that performing the tasks in the briefing process effectively relies on having the personality traits which influence effective performance, as a consequence prove that there is a correlation between effective performance and traits construct. This is especially significant when gathering data, analysing, synthesising, decision-making and communication in the briefing process.

The assumptions made about personality trait influence on performance are utilised to show that construction briefing is likely to be influenced by personality. Traits evident in the work of the big-five, NEO-PI-R and 30 specific traits, Costa, (1996); and 47 traits of the construction management professionals measured by Atalah (2009) and Hartman (2008) are utilised. This is to establish to differentiate traits of the consultant project manager in the briefing process from those of construction management professionals in their roles.

The comparisons of personality traits in different construction function seeks to argue for a place in the briefing improvements discussion, while advancing traits

influence theory in the briefing process. As such the philosophical assumptions about the concept of differences in performance among individuals will be address from the response to the following:

(1)What are the traits associated with the consultant project manager performance in the briefing process?

(2) Are these traits similar to those of the consultant project manager in other roles in construction project?

(3) To what extent personality trait influence performance?

As such a holistic view of the construction briefing process including improvements linking to personality influence is presented.

1.7.2 Section two – Empirical studies

- **Chapter (6) Outline methodology and method**

This chapter provides a description and justification of the approach and tools employed to investigate the problems. It examines the generic research approaches and discusses strengths and weaknesses of various research methodologies. This was done in order to identify the conceptual framework of the research, thereby advancing a rigorous methodology for capturing the evidence for evaluating the influence of personality traits of the consultant project manager on practice in briefing process. Major research paradigms in the social science have been examined to advance the philosophical premise of the research. In addition the issues relating to the qualitative research strategies have been discussed to provide an overview of the data collection instruments. In light of the interpretative paradigm three data collection approaches were introduced as the overall strategy for collecting the data for the research and respond to the questions. Further, in terms of strategies, the approaches were selected to

influence the research methods when it comes to collecting the data and analysing the evidence. Consideration is given to the objectives of each approach, for example:

- Case Study (In-site) – to facilitate observing the study for three specific reasons, namely;
 - (1) To observe how conventional briefing practice is conducted
 - (2) To observe the personality traits of the consultant project manager in the briefing process
 - (3) To measure and rate personality traits of the consultant project manager in the briefing process

Because a single case is being investigated other samples are sought to supplement the case study, as such the consultant project manager performance in other cases across the industry(defined as across site cases) would observed. In addition an industry wide questionnaire survey to supplement the cases would be conducted. This approach provides an enhanced perspective of the industry practices thereby providing opportunities for observing trends. The basis for supporting the case study and across site observation is explained.

- Briefing sessions (Across-sites) - No one kind of evidence is sufficient on its own. Therefore collecting evidence across site (by direct observation, interviewing professionals) provides the opportunity to cross reference data for trends
- Consultant project manager questionnaire- The questionnaire survey supplements the cases. It provides opportunities for respondents to self-rate performance and assesses influence of traits. This approach provides a broader opinion from representative sample population.

- **The basis for the data collection**

From the literature it is discerned that the way the consultant project managers in the briefing process behave, feel and think can be evaluated if we understand the situation in which they are operating and what they are trying to achieve, as such the review details the evidence collection process required for validating the study.

The evidence for evaluating the influence of personality traits of the consultant project manager on performance in the briefing process should relate to:

- Understanding current briefing practice and the tasks involved in the process.
- The traits associated with the consultant project manager performance
- The relationships between personality traits of the consultant project manager and performing the tasks
- The influence of personality traits on performance
- The appropriateness of the analytical method to correlate relationships.

Because evidence must be credible, the review points to the sample area for the evidence, so when analysed responds to the research questions. Of crucial importance therefore is the population sample which is expanded in the review process.

It is contended that there is only one aim to data collection, that is: to have evidence available for analysis, to answer the question set out. This supports the view for selecting three approaches to investigate the client briefing process and evaluate the consultant project manager personality traits effects on the briefing process. It is premise on the basis that individual's behaviour, thoughts and feeling are partly determined by their personalities. The implication of each for influencing the process of data collection is explained below:

(A) CASE STUDY (WITH-IN SITE)-Briefings

Essentially the data collected is through direct observations and discussion to provide credible evidence in response to the problems in briefing. They relate to:

- How the briefing process is conducted
- Traits displayed by the consultant project manager during the client briefing process.
- Frequency of trait displayed at each information incident area.
- Participants involved in the briefing process
- Time of occurrence.

(B) BRIEFING (ACROSS-SITES) – All evidence is of value when carefully appraised. Therefore the procedure followed for collecting data with-in site (case-study) equally applies to the across-site approach (in other sector of the industry).

(C) QUESTIONNAIRE SURVEY

The purpose is to have a wider sample population from a cross-section for data so that findings can be compared with other research data for analysis and discussion. Trends will be available. Respondents are asked a series of questions to rate generic trait importance, agreement, disagreement in the briefing process to determine influence on the process outcome. In addition respondents are asked to rate the importance and satisfaction level of performance of the CPM, using the Likert scale from zero to ten.

- **Chapter (7.0) Analysis of the results- the case study and across site observation**

This chapter presents the result of the statistical analysis of the case study and other site observations (data) of the briefing process in the real world situation to determine

the direction of the research. The analysis of the data is by the Pearson product moment method to determine relationships between the research objectives and the outcomes, with references to the original research questions, which includes:

- How the briefing practices of the consultant project manager in the development of the client brief can be explained from the perspective of personality influence.
 - The personality traits associated with the consultant project manager in conducting the briefing process.
 - The relationships between the consultant project manager's personality traits and performance in the briefing process.
 - The traits which are strongly related to effective performance of the consultant project manager.
-
- **Chapter (8.0) Analysis of the results - the questionnaire survey**

This chapter presents the results of the statistical analysis of the data obtained from the questionnaire survey to demonstrate the direction of the research. As the focus is on relationships between personality and performance the data is also analysed by Pearson product moment method to establish relationships. Specifically the information from the respondents is coalesced and analysed to achieve the following:

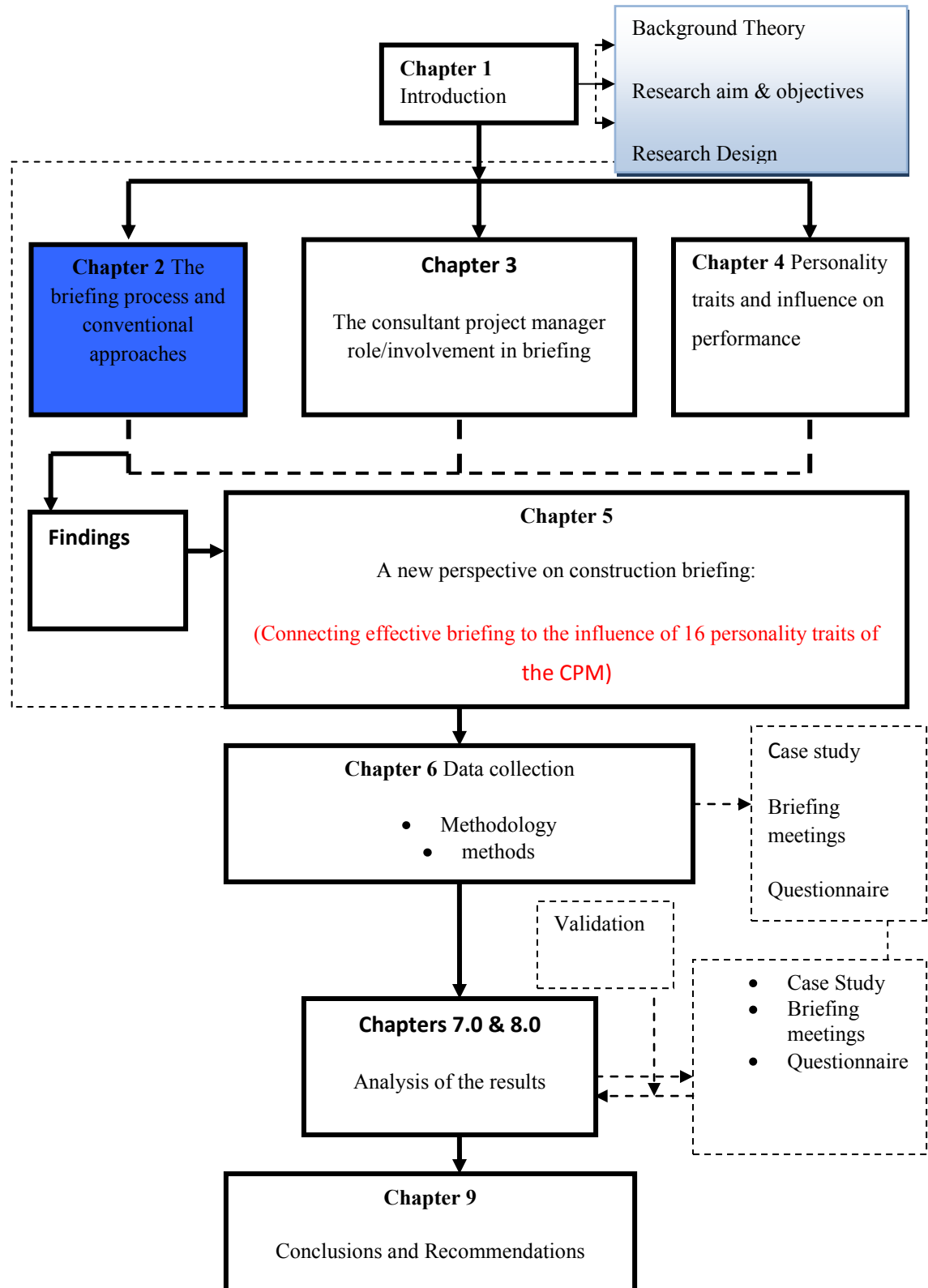
- Describe the background of the respondents
- Determine the traits of the consultant project manager which are related to effective construction briefing performance.

- Determine the relationships between effective construction briefing and personality traits to evaluate the influence on the consultant project manager performance.
- To develop a traits construct hierarchically for comparison with traits of the consultant project manager in other construction roles.

- **Chapter (9) Conclusion and recommendation**

This chapter provides an overview of the thesis and draws conclusions based on the previous chapters. It pins the discussions on conclusions of the results obtained in the evaluation process and assesses both the potential value and weaknesses of the study. The chapter finally summaries the research and discusses key issues of the traits of the consultant project manager in other construction roles with those associated with the consultant project manager in the briefing process to present the justification for a holistic review of all elements in the briefing process and identifies areas that require further investigation. The overall contribution to knowledge is summarised and recommendations are made for further research.

Chapter 2 The Briefing and Conventional Approaches



2.1 Introduction

The purpose of this chapter is to define the briefing process and conventional approaches adopted by consultant project managers in preparing the brief. This is achieved by means of a review and appraisal of the salient point of the relevant literature.

Based upon the understanding that construction briefing is a process which involves different personalities, for example the consultant project manager, clients and other demand and supply stakeholders interacting to understand and identify the client project requirements the various approaches by the consultant project manager to briefing is reviewed under the key areas- the brief and the briefing process – the procedural stages of the briefing process and the relationships of key participants, current briefing practices, conventional practices, briefing limitations and consequences.

It will be found that the consultant project manager practice is based on understanding of the client requirements. It is taken that the consultant project manager involvement is one of the best practice options for improving current practices, where he or she takes ownership of the process, but based on the personality theory of performance and personality (Costa 1996) his (her) approach is influenced by personality traits and because personality influence performance this often results in variation in performance output across the sector. Taken as a whole, an overall picture of construction briefing process and the issues relating to the consultant project manager thinking, practices performance limitations are presented to indicate a relation to personality traits.

2.2 The briefing process and the brief

Briefing and the briefing process has often been criticized and this has been highlighted in the Latham report and the CIB publication which dealt with briefing the

team (Barrett and Stanley 1999). Some of the criticism quite rightly has been attributed to the client who often fails to make explicit their requirements (Banwell report of 1964). This was discovered by Latham and addressed in his report (1996). Essentially briefing is an early stage process. It typically involves the consultant project manager and others interacting to identify the client requirement. According to Yu et al. (2006) the briefing process involves different individuals gathering, analysing and synthesizing data for identifying the client requirement. Often briefing involves collection of information for project implementation and often requirements are taken to be the same as client requirements (Kamara, Anumba and Evbuomwan 2002). The process of gathering information is about getting accurate or factual information about the project and the consultant project manager understanding the context of what the client requires to be built. Importantly, at this stage the client should be clear about the specific needs. The literature contends that this can be done formally or informally, essentially the client aspirations are made known (Shen et al. 2006 citing CIB 1997). In this process therefore a channel is established to convey decisions and information between the client and consultant, allowing the client requirements to be investigated, developed and communicated to the design team (Shen et al. 2006; Construction Excellence 2004) and essentially understood. A good briefing process also hinges on establishing good teamwork and interpersonal relationships (CIB 1997).

While the focus of briefing is generally concerned with understanding the client requirements and the literature replete with studies regarding its importance to the successful delivery of project, issues such as a poor understanding of the client requirements can complicate matters and achieving effective briefing appears to be an elusive target in the construction process, as such understanding the client requirements is therefore the essential first step to deliver an effective process (Kelly and Duerk 2001).

According to Shen et al. (2006) and Atkins et al. (1995) effective briefing therefore is about analysing the needs of the client properly and examining all options

fully. Similarly Mastrendrea (1986) contended that having the right individual for the task is equally important (Atalah 2009). The benefits are, client are protected from delays and cost overruns (Shen, Kelly and Hunter 2005), while if poorly done can contribute to unnecessary cost having to dismantle a project which is not performing well and contributing to staff low moral (Construction Excellence 2004).

Importantly Bouchlaghem et al. 2000 cited another key area often overlooked, and contributes to briefing barriers. This is related to a lack of a clear definition of the briefing process. According to Bouchlaghem et al. (2000) having a clear definition of the briefing process and how the brief evolves are essential if the client requirements are to be satisfied, and for projects to perform successfully. Presently it appears there are many different perceptions of the briefing process within the construction industry, and amongst researchers and professionals working in the field that could influence the briefing approach and this should be made clear as it could ultimately shift the focus away from the client requirements.

For example, Kamara *et al.* (1996a) wrote “the brief is a comprehensive, formal statement or document that is the medium for expressing or communicating the objectives and needs of the client,” Evidently in the representations there is the exhortation that the process of detailing and organising the brief is described as briefing. Kamara et al. (1996a) suggest this involves the development of the client’s initial statement of need into detailed technical specifications (functional brief) for design purposes.

The brief is where everything flows. In describing the brief, the Construction Industry board (1997), noted that this is the formal document which sets out a client’s requirements in depth. These requirements are evaluated from an information exchange process where the client informs others of his or her needs, aspirations and desire, either formally or informally.

Further, Blyth and Worthington (2001) suggest briefing is an evolutionary

process which involves understanding an organisation's needs and resources, and matching these to objectives, whereas the brief is the product of that process. Such views appear to widen the customer base, emphasising the cyclic nature of understanding what is really needed. Blyth and Worthington (2001) concluded that this process involves problem formulation and problem solving, inclusive of managing change.

From the above discussions it appears the different professionals understanding of the brief and the briefing process is variable. There are clear distinctions in their understanding of the process (Bouchlaghem et al. 2000). However what is also obvious is, though the definitions appear to differ in conception, all have as their central theme the importance of the client requirements and suggest emphasis should be placed on getting and detailing the specification of the project requirements, ensuring they are clearly formulated, understood and communicated. This is the root of good briefing, which are important for the successful delivery of a project (O'Reilly 1987). In addition Barrett et al. 1999) noted the process is in effect an appraisal of the client needs and this is the main link to success and where strategies are dependent on client and project type (Anumba et al. 2003). Finally the different definitions may be explained by the diversity of the industry discipline, activities, projects, and interests (Bouchlaghem et al. 2000).

2.2.1 The development of the briefing process

The development of the briefing process begins from a conception process. Specifically, when a construction project is initiated key issues of understanding client requirements and, ultimately communicating the issues in the form of a brief dictates the general approach to identifying the client requirements. The process can appear to be fuzzy at the front end, because usually this is the area of great uncertainties where key project issues tend to be missed. Setting objectives and identifying requirements, key stakeholders for the process is essential and should be clear of ambiguities to pave

the for the forward movement to take place. In other words for the client objectives to be adequately communicated to the team and other stakeholders, briefing must encompass all the information necessary for the functionality of the design without becoming too overly prescriptive (Hardcastle and Tookey 1998).

Mastrandrea(1986) noted this can largely unravel the areas of uncertainties, because the project manager tasks are largely facilitated by the description and project requirements. In many instances the development of the process, however large should take account of the client issues. It is argued that the process should generally tailored to the needs of the client organisation and project, to the extent that it addresses many of the key issues to form the basis for initiating the project accurately, for example the requirements of the project, deciding the approach, in addition to addressing the project objectives in measurable, realistic and time-bound terms (OGC 2008).

Because of these matters of importance the commonly used approach is to engage the consultant project manager to undertake the tasks (Yu et al. 2005). A good consultant has the composure to address these issues with the client, while getting past the client's initial fear and concerns (Construction Excellence 2004). This gives the clients assurance that key elements are addressed and that their building will be delivered in a manner which responds to their need in a reasonable predictable and important way.

There are two key issues of relevance at this phase, first the briefing process emerges from the need for a change and getting value for money is foremost on the client's agenda. Therefore defining the client requirement clearly and unambiguously (Male et al. 1998) is considered key to achieving the objective.

In other words projects should have a series of briefs, each taking the preceding one to a greater level of detail. Though these elements are critical, fundamentally the process is not as straight forward as many may perceived and though it is simply finding the means to an end, it is influenced by several factors (Barrett 1990). The question as to

the structure can be subjective. It is generally felt that briefing is a personal undertaking of the consultant project manager (Barrett and Stanley 1999).

Secondly the process produces the brief which serves to guide the construction phase. O'Reilly (1987) suggests some form of accountability is necessary. Appropriately a checklist with details, of aims, resources, context, and historical content, planning, environmental and legal framework is essential for ensuring the briefing clearly defines the requirements. Fundamentally in the briefing the issues are usually structured under three parts namely;

- (A) Project identification
- (B) Aims, resources and context
- (C) Design requirements

Further, Blyth and Worthington (2001) noted that there are six essential steps in the process which they explained as;

1. Defining the process- where the framework for the briefing work is established. A key point was made which indicated that the process should not be slavishly following a sequential flow chart of steps. Being the fuzzy end it should be and interactive and concurrent process.
2. Timely decision taking – This is about recognising the value in identifying the value in tackling issues in a timely manner and managing the process of making decisions when they are necessary rather than late when the cost can go up. Blyth and Worthington (2001) contended this is also about recognising that the briefing process is continuous and looks back on itself as feedback is generated, and looks forward as feedback is used to inform future decisions
3. Understanding underlying agendas- Property need arises for a host of reasons.

Sometimes a set of personal or corporate agendas masquerade as real needs

4. Planning for future change- This involves setting future goals in a change management process to support the organisation future development programmes.

5. Clear and comprehensive communication- Successful briefing demands attention to communication and how information is structured and passed through the system.

6. Feedback of experience- this is essential where the origin is from two places, either learning from within the project whether it is during the process or from the completed building or it comes from outside the project and organisation such as other companies or the construction industry. Feedback is vital both to the management of the building and the organisation. It is also important for understanding how to carry such project in the future as well as managing the briefing process itself (Blyth and Worthington 2001).

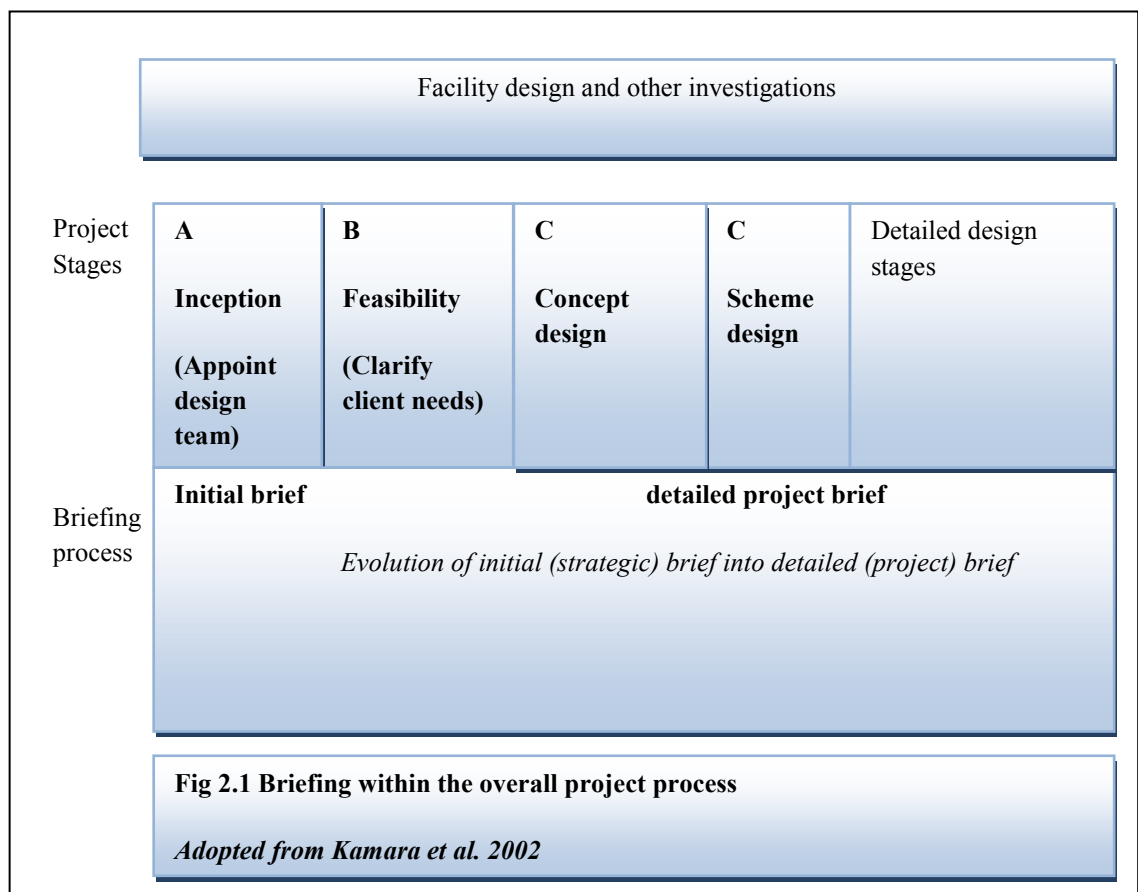
This conception appears to be suggesting that briefing has a defined procedure. On the basis that the process involves key stakeholders interacting, also appears to be suggesting that for the process to achieve its objectives requires good teamwork, which in turn depends upon good interpersonal relationships. Barrett and Stanley (1999) argue that running the process throughout the project process the client requirements are progressively captured, consideration should be given to the type of briefing which will ultimately determine the process. Importantly the aim and objective of the briefing process should ultimately identify the client requirements and the strategy employed should allow for a comprehensive evaluation of the project issues. It is on this basis that the briefing process has been suggested to be staged. Blyth and Worthington (2001) made mention of the different types of brief, including strategic and project, these two appear to share a close link. It is stated in the literature that the strategic phase places emphasis on identifying the overall mission of the project, whereas at the project briefing phase, involves gathering facts about the building project. Bowen et al. (2000) define these phases as strategic and tactical.

2.3 The procedural stages of briefing - evaluating client requirements

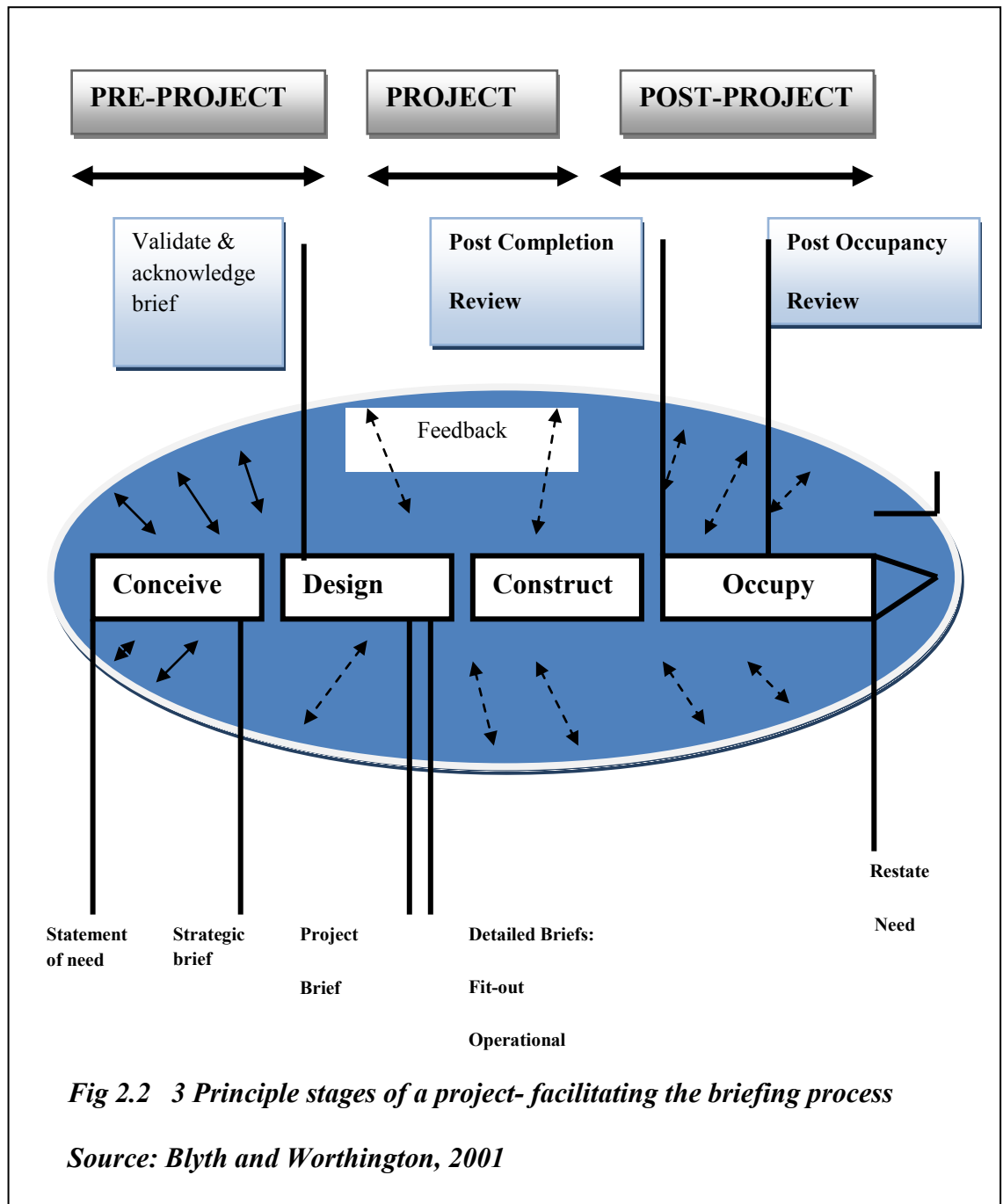
For decades effective briefing stressed the importance of procedural approaches, and there are several examples of best practice approaches for achieving client requirements. According to Hardcastle and Tookey (1998) in recent time, some attempts have been made to optimise the briefing process for clients by providing procedures and best practices guidelines, notably, with representation for the process to be continuous, running throughout the project stages (O'Reilly 1987). Fundamentally these stages are often referred to as the strategic and tactical briefing, where the two fundamental issues are addressed. The strategic stage (firstly) seeks to identify the organisational needs, and then to decide whether a building (or buildings) of a general type and in a certain location is the most effective solution to those needs (Kelly et al. 1992), whereas the second stage is more of a tactical decision making phase where the design of the building considering the activities to be undertaken is formalised. But what is it in these stages that will ensure the client requirements are effectively identified. The CIB (1997) draw a distinction to show that the strategic stage points to setting the parameters and this allows for careful evaluation of the client requirements, while the project stage mainly focuses on converting the strategic brief into physical assets according to design specification. If these essential steps are effectively carried the likely benefit to the client is the satisfaction of their requirement. There appears to be general agreements among authors of the two stage process. Blyth and Worthington, 2001 argue such researchers approach would enhance the prospect of capturing the client requirements. In the 1970s briefing was originally conceived as a discrete process, where design could not begin until the briefing stage was completed (Blyth and Worthington 2001).

The OGC (2008) suggests that because the process should start with an initial evaluation it gives a point of reference to begin observation and continues through a series of activities sequentially, as it is with a project development process.

Blyth and Worthington (2001) and Barrett and Stanley (1999) contended that the pre-project stage is where the brief development process is conceptualised to follow a specific pathway to enable the client requirements to be explicitly developed while responding to the statement of need. This is regarded as a one-off process at the initiation stage through which client requirements relating to project objectives are identified in advance in order to subsequently guide the design and construction process (Kao 2004). Because this stage of briefing in the project process (project stages, fig 2.1) is crucially important, a suitably instituted approach is necessary to enable interpreting, documenting and communicating the information so that there are clear objectives at the beginning before formal design work commences.



Further the CIB (1997) guide to better briefing has divided the process, into five key stages to suggest testing the functional issues of briefing. These are getting started, defining the project, assembling the team, designing and construction, completion and evaluation. The brief development is similarly represented after initiation but highlights the briefing process as two separate and distinct set of activities, strategic brief and the project brief. Blyth and Worthington (2001) succinctly describes the activities in a framework conceived in three principal stages, namely pre-project, project and post project and highlight the significance of briefing at the pre-project phase (**fig. 2.2**).



They contended that the pre-project stage can be considered the conceptual stage where the client defines the need for the project and leading into the strategic issues. This is the phase of examination of the business objectives and testing of other options. It is at the end of this stage that the project is formalising. Whereas the pre-project and project stages validates and define the project, the post-project stage focuses on testing the project to see whether it meets the need defined in the earlier brief.

2.3.1 The strategic briefing phase

Initially this stage reviews the statements of requirements against objectives (Blyth and Worthington 2001). Crucially it is expected that the client objectives are clearly defined (Yu et al. 2006 citing Blyth and Worthington 2001) to guide the subsequent activities in the construction process.

One of the advantages at this stage is the opportunity to explore the different options for delivering the project. Here the notion of what the strategic issues are can be fleshed out before advancing to the next stage. In essence, the strategic phase appears to consolidate the needs and aspirations of the client and other stakeholders, with clearly defined objectives for the project. Evolving of this strategic process is the key document (the brief) which now forms the reference to assist with the management and evaluation of the project process.

2.3.2 The project stage

The key here is essentially delivering the project to the specification defined at the strategic stage. In other words the activities are now translated into physical structures, measurable by sizes, quantities and a budget defined in terms of cost on functional space requirements and outline specifications (Blyth and Worthington 2001).

The revised RIBA (2010) plan of work explains more concisely the briefing process as part of the preliminary process.

Salisbury (1998) suggests the RIBA frame of reference has a number of key tasks engaging the client and architect. He stratifies them into specific stages and suggested briefing must occupy the first four stages (Kao 2004) - Stage A -Inception, Stage B- Feasibility, Stage- C Outline Proposals and Stage- D Scheme Design but should end just before the detailed-deigned stage (Stage E -Detailed-design). In each stage the defining issues are:

Stage A: At the Inception stage

- *The outline: at this stage a general statement outlining the client requirement for the project are defined*
- *Client organisation: the client sets up a team for briefing with a chairman to manage the matter from the client end*
- *Architect appointment: after accepting appointment from the client, an architect expects to obtain a great deal of background information from the client organisation.*

In the RIBA Briefing Process Chart the following are made explicit.

Stage B: Feasibility

- *Feasibility report and recommendations: the architect carries out the related studies of the project to reach decisions, and then provides the client with an appraisal and recommendation report in terms of feasibility, functionality, technology and finance*

Stage C: Outline proposals

- *Outline proposals and report: the architect develops the brief further to propose general approach to layout, design and construction in order to obtain authoritative*

approval and decisions from the client. Furthermore, the client will be able to elaborate and add in all the details to help the brief be consolidated

Stage D: Scheme design

- *Scheme design proposals and report*: this report is to complete the brief and decide on related particular proposals to obtain all approvals from the client organisation.
- *Final brief*, this is final development of the brief to render the brief into a firm and complete statement through finalising all information and actions *required as stated 'brief should not be modified after this point'*.

The plan explains the briefing development along a specified path to realising the final document which guides the process ahead. In general the order of the stages is defined and the expectation is for them to be followed, similarly the emphasis is on the briefing outcome.

2.3.3 The post project stage

In reality effective monitoring and evaluation in the briefing process, is extended to include the post project stage and relies on effective feedbacks from client and other stakeholders. At this stage the briefing process is no longer seen as a one-off process, but as a continuous process where feedback contributes to the evaluation process, thus providing information to aid new projects (Duerk 1993; Nutt 1993; Construction Industry Board 1997; Blyth and Worthington 2001). Simply put briefing is a continuous process of post-occupancy evaluation assessment where learning is advanced from the failure of previous building projects performance.

Nutt (1993) expanded the briefing process as a cycle of events to show briefing as a process relying on feedback information. In this way the process relied on periodic

modification and improvement of facilities for a long-term consideration. In addition the briefing process would then review and assess the project performance, and provide valuable feedback to maintain the facility and to improve the future projects.

Similarly Blyth and Worthington (2001) identify three forms of briefing evaluations at the post-project stage – those are; evaluation of the process of design and construction, evaluation of the product of building as hardware, and evaluation of building performance in terms of business organisation. Blyth and Worthington (2001) shows the process to be comprised of a series of design activities to identify the various types of briefs to be developed at each stage of the project development process. As such the proposed briefs outcome in this way is regarded not only as guidance for the development of the design process in sequence, but also as evaluation criteria for post-project briefing.

In summary reviewing the stages of briefing in the construction process provide the opportunity to evaluate the progression of briefing throughout the construction process as specified by the various frameworks. The conclusion is that in each of the construction framework where briefing is done, there are specific tasks designed to be undertaken, which to the outcome of briefing. But despite the orderliness the methodological way in which briefing is conducted, there is no way you to say definitively what is actually transpiring at each stage. The suggestion is that the activity at each stage is influenced by the brief taker. None of the framework evaluated actually say much about the personality of the individuals involved. They are mainly concerned with the outcome rather than what occurs in each stage and the competency of the brief taker.

Blyth and Worthington (2001) alluded to the importance of feedback which is essential for evaluating the post-project stage of the briefing process. Generally the information received from the feedback serves in good stead for future reference, especially when there is the need for post evaluation. However there are times when

information received from feedback may be challenged especially when applying a non-rational theory (March and Olsen 1997).

The procedural stage referred to earlier therefore provides the opportunity for monitoring, and though each stage allows for a specific outcome, it is a bit fuzzy on the process of briefing. Simply put the procedural stages are mainly focussed on outcome at every level, rather than the actual practices and occurrences at each stage.

2.3.4 The task stages of briefing- an information perspective

Reference of the rudiments of briefing and importance of understanding the client requirement to communicate to the design team, are essential for conveying the client requirements. This involves consolidating critical information or converting the information inputs in definitive outputs to reflect the client's requirements. This assumes the client requirements can be identified definitively by checking or processing information in models (Kamara et al. 2001). This is best defined by the checklist method (section 2.2.1) where the structural parts aid the process and emphasizes the importance of prior recording, which follows a particular order of activities.

2.3.5 The checklist for briefing

Relating to the checklist approach, there are several published guides on the formats each representing key elements of the process which are addressed by both client and consultant project manager at the development phases of the brief to suggest the applicability of the checklist list approach. Table 2.1 gives ample classification of the various guides.

Table 2.1 Briefing guides classification

Type of Guides	Explanations	Examples
1. General guides for clients	Help clients understand the construction process and the necessary preparation prior to approaching the industry with a project	Thinking About Building (NEDO,1985)
2. Specific to a Procurement Method	Concentrate on the role of the client within different procurement system and place the architect and the consultant team in a dominant role	Traditional Method: Plan of Work (RIBA,1973) Non-traditional Method: briefing the team (CIB,1997)
3. Specific to a building type	Associated with a specific building type, a standard guide on briefing and design procedures	Library Building: a briefing and design guide(Konya,1986)
4. Computer-based guide system	An interactive computerised guide system with a great deal of information to respond selectively to specific inputs and queries	Client guide (Reading University)

(Source: Kelly et al. 1992)

Further, O'Reilly (1987) contends the checklist approach should include the following:

- Purpose and policy clear definition including historical background, project aims; *scope*; on policy; operation, design requirement, statement of need, and method of communication are essential.
- *Operational factors*: a description of the desired activities and function of the project, such as activities to be accommodated, who is to use the building, how activities are to be run and organised to relate to one another, items to be housed, storage requirements, degree of flexibility required.
- *Design requirements*: a specification of the physical needs for the internal and external environment, such as schedule of accommodation, space requirements and specific groups, grouping, zoning and layouts, movements of people, goods, mobile equipment and animals, external requirements and site layout, movements of vehicular traffic, requirements for engineering installations, etc.

Generally, all issues listed (table 2.1) are predetermined and categorised in order so that it links to the procedural stages of the briefing process. Some of the benefit of the checklists is in the assistance they provide to all parties, the consultants; designers when producing the working briefs, ensuring crucial point are not carelessly missed.

These checklists can also at time facilitate client's responses on topics that are relevant to project requirements, and also ensuring relevant issues are discussed thoroughly and recorded in a explicit manner in the final the briefing documents. This then set a benchmark for the client requirements to be checked out comprehensively by way of a standard set of topics and questions at the end.

In the context of the above setting the role of the briefing consultant is to provide advice to assist the client and ensure all necessary information for the project is collected completely. In this respect, briefing is seen as a unilateral process of information collection from the client by the consultant (Kao 2003).

2.3.6 Information collection and presentation

Accurate information is key to successful briefing, and usually the outcome is successful projects and client satisfaction (Sanvido et al. 1992; Worthington 1994). According to (Bouchlaghem et al. 2000) all projects generate and use information; the complexity of the project often dictates the amount of information captured, stored and managed. For complex and sizeable construction project massive amount of data can be generated which can make it difficult to assess and conceptualised fully. Essentially consideration should be given to the process of collecting the information. Generally there are several approaches depending on the stages of the project, suffice to suggest that information properly recorded and presented serves to make the interpretation of the details fairly simple and less cumbersome. For example Blyth and Worthington (2001) suggested methods in table 2.2 gives credence to the generally adopted methods, suited to specific stages and the information required. For example through:

- *Interviews,*
- *Workshops,*
- *Electronic equipment for space-time utilisation studies,*
- *Continuous discussions,*
- *Examination of client documents (e.g. meetings minutes, memoranda),*
- *Evaluation of existing facilities,*
- *Visits to similar facilities*

Table 2.2 Methods of collecting information	
Pre-project Stage	
Method	Information
<i>Existing Records</i>	<i>Organisation Facilities</i>
<i>Interviews</i>	<i>Key Personnel</i>
<i>Survey of Existing Facilities</i>	<i>Building Plans and Data</i>

<i>Visual Survey</i> <i>Building Visits</i> <i>Focus Groups</i>	<i>Space and Time Usage</i> <i>Discussion and Data</i> <i>Comparative data from open-ended discussion</i>
<i>Project Stage</i>	
<i>Method</i>	<i>Information</i>
<i>Activity Surveys</i> <i>Workshop</i> <i>Interviews</i> <i>Questionnaires</i>	<i>Detailed Requirements</i> <i>Review Initial Information</i> <i>Specialist Needs</i> <i>Space, Time Usage Requirement and verification</i> <i>Concept and Sketch Design</i>
<i>Source: Blyth and Worthington 2001</i>	

In terms of effective presentation Hyams (2001) contends that this requires at least five techniques to describe the activities undertaken and making explicit the information collected. These he contended include;

- *Flow diagrams: to provide a trail of activities for analysis*
- *Relationship matrix: to show several degrees of proximity of required spaces*

Relationship diagram: highlights relationships between activities.

- *Spreadsheet charts: to provide results for analysis*
- *Visualising size: to help the client understand the implications of their requests*

The contention of Hyams (2001) suggests that collecting, recording and presenting the information to define the outcome of the briefing process, can be represented not only in words, but also figuratively and which also be achieved through methods such as

interviews, observation, workshops and evaluation of new information.

2.4 The involvement and relationships between participants in the briefing process.

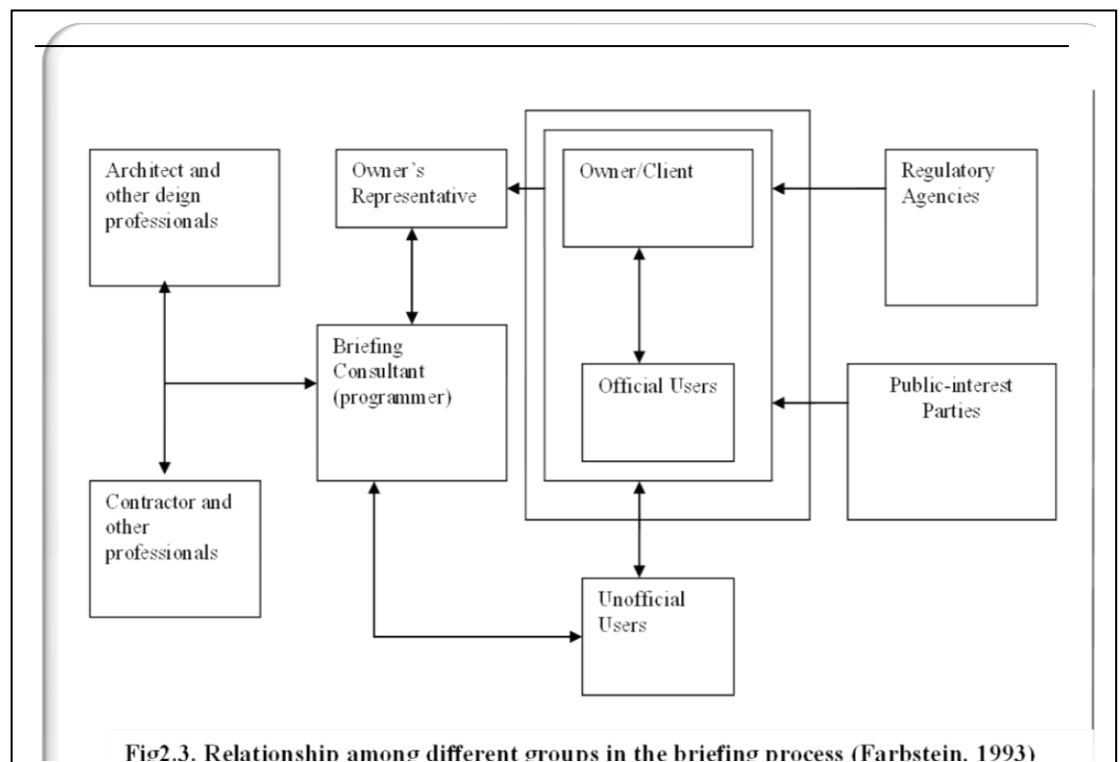
An essential phase of the briefing process is the relationship between key stakeholders. A good briefing process generally revolves around good team work, which depends upon good interpersonal relationships (Construction Excellence 2004). In establishing good relationship in briefing, is in effect facilitating dialogue and relationship between the client and the consultant in order to understand client requirements. Clients it is argued are the driving force behind projects, however they are generally classified by types, experience level and sector and this can contribute to some complex issues. It is contended that in particular the inexperienced client require more assistance than the experienced client, but more particularly in seeking assistance clients in engaging the consultant project manager seeks to ensure the consultant project manager thinking is in keeping with their philosophy (Construction Excellence 2004), so that a common understanding can be established.

2.4.1 Key participants of the process

The case of the client, consultant and other stakeholder values are depicted in fig 2.3, to show interpersonal relationships. Therefore considering briefing success depends on team effort, especially between the various participants from both the client group and the consultant team (Barrett and Stanley 1999) the contribution of each participants involved is essential(Construction Excellence 2008). As such the participants represent a complex entity to foster lasting relationship. Foremost is the relationship between the client and the consultant in order to understand the client requirements. According to Cherns and Bryant (1984) there is greater understanding of the client's responsibilities and roles because the central issues of importance are clear in seeking to develop an

effective briefing process. In this way the briefing process promotes a social interaction and interpersonal relationships between the client and the consultant. This allowed for an enabling environment, and the opportunity to place individual in position of interest and authority makes their individual roles more explicit to each and this contribute to the management of the process. As such participants in the briefing process can be categorises accordingly and in groups as shown (fig 2.3) (Farbstein 1993).

- Clients
- Building users
- Regulatory agencies and public-interest parties
- Consultants



There are situations where buildings have users who are not official members of the owner's organisation (fig 2.3); for example: visitors, customers, and patients and can be grouped as the unofficial users. When it comes to the briefing process the views of these individuals are also important and should be considered during the brief development (Farbstein 1993). Outside interest such as regulatory agencies and public-interest parties, are also important for consideration and including in the briefing process. Likewise public authorities and government departments who have responsibilities for controlling and approving certain aspects of a project through planning consents and building regulations must be critical elements for consideration. The input of these groups, accommodated at the early stage of the project can only benefit the quality of the brief development process. There are strong arguments for the public and other environmental groups, who normally have legitimate concerns about the project development to be considered. These are also significant contributors and their views, when considered, even if it is by legislative codes or regulations can only add to the quality of the process.

However, it is the consultant team, given the authority, which provides the briefing consultancy and should be relied upon to give proper guidance to the client group in defining their requirements. Other professional involvement should be dependent on the client's informed choice of procurement routes for the project. It is also common to find contractors as part of the consultant team offering advice on buildability and construction issues.

2.4.2 Essential roles of key participant – the client

The process of briefing is enhanced when the client makes explicit expectations in terms of requirements of the project. On such issues the client can be seen as the individual who decide whether a project should be undertaken as well as ensuring an effective management structure for the project is in place (Blyth and Worthington

2001). As the customer for the project, the client is the initiator of the project. As such the client is now responsible for the project development, and the client relationship with the consultant and other key stakeholders at the inception stage of the briefing process become essential to encourage frequent interaction, exchanging views on the specific development criteria for an effective brief (Murray 1993).

2.4.3 Essential roles of key participant – the consultant project manager

The role of the construction consultant in particular is not solely management. The consultant project manager is also a specialist who also bring a degree of independence and a different perspective to the fore, including new approaches, new skills, attitudes and expertise in approaching the setting out of the core issues, bridging gaps between competing interests and bringing a realism that may be lacking with an optimistic project team.

Because of the growing awareness of the complex nature of project whose complexities varies according to project type, characteristics and information client are engaging the specialist consultant project manager to clarifies difficult issues and ensure the process moves forward (Construction Excellence 2004; Bright et al. 2004). The consultant project manager generally takes ownership of the process (Blyth and Worthington 2001; Barrett and Stanley 1999). O'Reilly (1987) contends that the consultant project manager presence has direct impact on the direction and outcome of the process.

The impact of this is mostly felt at the project's beginning, where proactive role adds value to the project team and other stakeholders. To believe that the task is simply to move the project team and related stakeholders toward clarity and improved overall execution is putting it simply. Successful consultants are judged generally by the overall impact of their role.

In this way the capable consultant takes time and effort to understand the business history, and encourages the client to take the necessary steps to improve the project while giving decisions which provide solutions to the client problem (Clark (1990). In this way the consultant is a bridge for communication between interested parties. Key to success is the ability to separate the forest from the trees. The ability to communicate contributes to a broader perspective and this allows all parties to remain focused on the broader and more critical issues of the project process. In the process of conducting the briefing the consultant coordinates every aspect of the briefing operation and these include identifying, discussing and clarifying the critical issues relating to the project requirements (Kelly et al. 1992; Blyth and Worthington 2001; Hyams 2001). His special skills of listening, communicating, along with traits attribute are essential in this circumstance (Blyth and Worthington 2001). According to (Hyams 2001), in particular, listening not only to hear what is being said accurately, but to listen for the feelings that lie behind what is said, and for what is not being said. Similarly, having an enquiring mind to probe and test ideas, technical problems, and also to ask the simple but obvious questions, as well as handling sensitive areas with tact and persistence (Kao 2004). This is important when required to transfer and interpret client requirements accurately and effectively. O` Reilly (1987) states that for these reasons the client seeks the services of the consultant with skills and experience suited to specific project requirements. The client therefore looks to engage the consultant project manager who possesses specific traits to articulate the business position and project requirement (Palmer 1981).

2.4.4 The client types driving the process

Client types represent a broad spectrum and their experience level varies in the business of construction. It is noted that clients are generally classified by sector, size, knowledge, experience and support needed (Kelly et al. 1992; Gameson 1992; Barrett 1991). For example Higgins and Jessop (1965) made a distinction between the

sophisticated and naïve clients on the basis of experience in the building process. Similarly, Rougvie (1987) refers to clients as public, individual or organisational clients. On the other hand Kelly et al. (1992) categorization of the clients made a distinction between the '*client body*' (those who will have a financial or operational interest in the building) and the '*decision-making unit*' (those who have power to influence the form of the brief). Hillebrandt (1984) in his time defined clients as those who are continuing clients' and 'one-off clients', the public and private sector clients. Masterman and Gameson (1994) made a somewhat wider differentiation when they looked concluded that construction clients are best classified in accordance with four categories: secondary inexperienced; secondary experienced; primary inexperienced; and primary experienced, but removed the distinction of primary-inexperienced client because organization whose primary business is the construction of buildings is unlikely not to have an established means of accessing the necessary experience.

This fits into the categorizations defined by - size (large or small), sector (public or private) and project interest (developer or owner occupier) – to classify the client type (figure 2.4). In a major way their disposition influences the approach to the briefing process. It is recognised that the larger the size of the client is, the greater the difficulty in recognising the '*client body*' and the '*decision-making unit*' during the briefing process.

It is more pronounced in the public sector, where in the broadest sense, the evidence shows that there are various interest groups involved in the briefing process, and this causes some difficulty in decision making. Although the definitions of these parameters are simplistic, this analysis points out that the client cannot be seen as unitary during the briefing process. However, despite the categorization and classification clients are the main stay of the construction industry (Green 1996a)

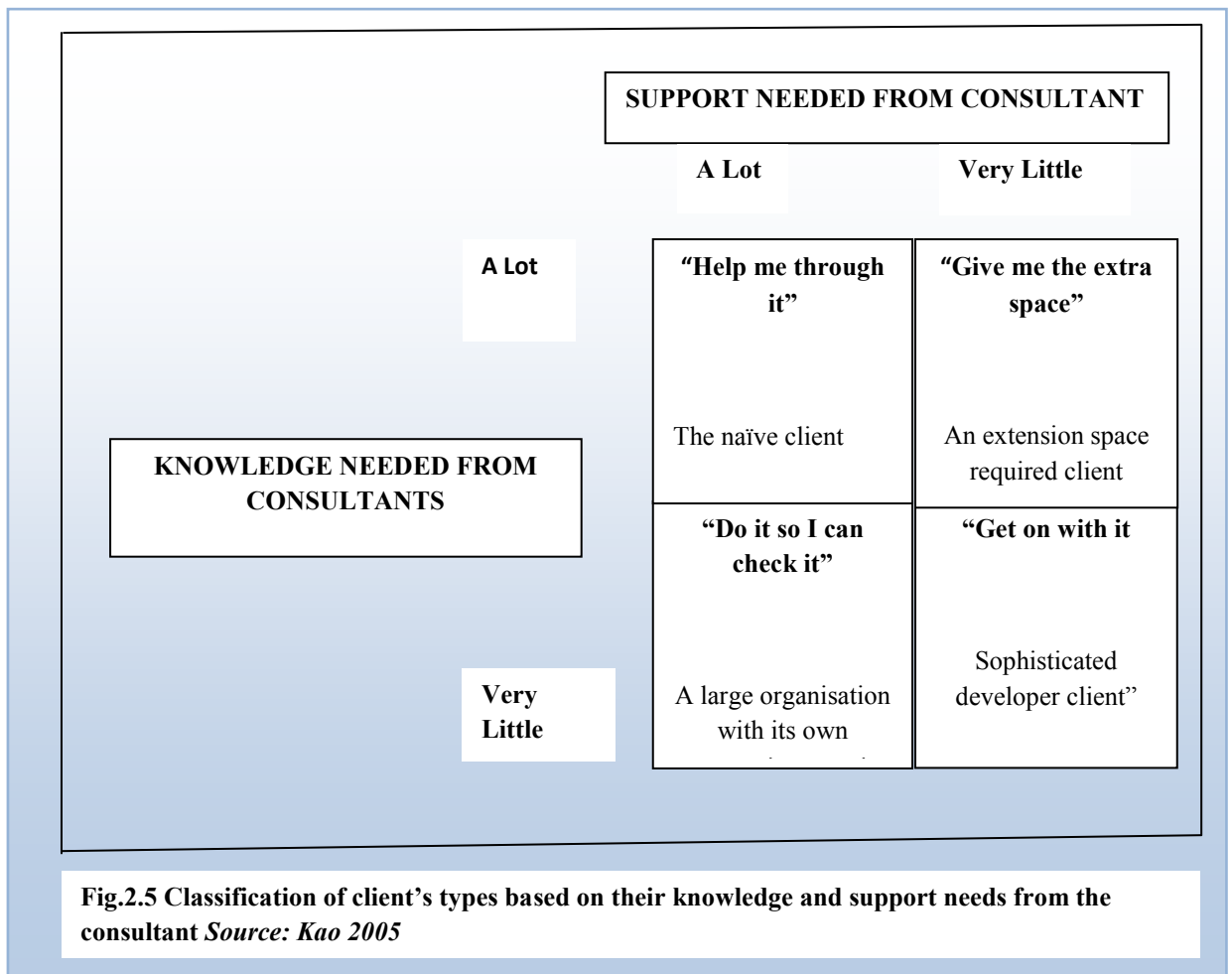
Client Size	Client Sector	Project Interest
Small	Private	Owner Occupier
		Developer
Large	Private	Owner Occupier
		Developer
	Public	Owner Occupier

Fig 2.4 Combination of Parameters of the Client Type (Kelly et al, 1992)

Regarding briefing interaction, especially between client and consultant, Gameson (1996) arguments is that these situations vary considerably because of two main factors:

- Prior experience (or relevant knowledge-base) of building construction
- Which professional discipline the client engages to conduct the briefing process.

For example, the client's prior experience of building construction encourages a more dominant position on his part when it comes to communicating with the consultants. Barrett (1991) suggests that the types of client can be categorised into four groups by the two dimensions - the varying degrees of knowledge and the amount of support needed from the consultant (figure 2.5).



The issues of leadership and knowledge influence the approach to briefing, and concludes that 'advisers (consultants) must diagnose their client's individual needs if the appropriate input is to be provided to the briefing process (Kao 2004)'. Although the focus is on different briefing services provided by the consultant, it also indicates that the briefing process includes the knowledge acquisition that is required by the client side.

Generally, all clients want their professional consultants to provide services that they cannot or do not want to do by themselves. Green (1996a) argues that 'clients

cannot be understood simply by classifying them in accordance with a predetermined set of characteristics because there is never any single "objective" interpretation of any organisational situation. Green (1996a) proposes a 'metaphorical analysis' of client organisation in accordance with the principles of naturalistic inquiry in order to understand the social complexity of client organisation and their briefing approaches. In terms of the underlying metaphors of client organisation, three characterisations of briefing approaches are analysed and identified, see table 2.3. Basically, it is argued that the metaphorical analysis is helpful in understanding client organisation in depth and adopting an appropriate approach to briefing.

Table 2.3 Client organisational metaphors and the briefing process			
Client Organisation Metaphor	Briefing Process Approach	Examples	
Machine Metaphor	The client's objectives and requirements are clear and pre-determined, and remain static over time. The machine description of classic management approach to briefing is appropriate	Bureaucratic clients(Govt. departments)	
Political Metaphor	The client is often incapable of producing their own brief and defining their needs and objectives that need to be probed in depth interactively. The iterative interaction, extensive, extensive collaboration, and probing and learning process are	Inexperienced clients or some multifaceted clients who need to adapt to change	

	needed	
Cybernetic Metaphor	The client is able to develop standard briefs, but encourages suggesting improvements and innovations. Learning from experience is required	Repetitive and experienced client
<i>Source: Green 1996</i>		

2.4.5 Project types and sizes

Similar to client being classified by type, it is so with projects, that they are defined by types and size. On the basis that briefing is about gathering information and making decisions on client requirement, size and type of project will add to the complexities and invariably the kind of briefing process. Generally client expectation are closely related to project size, type, cost, quality and based on the complexities of the information influence the consultant project manager approach to client requirements identification is so influenced (Luck et al 2001 citing Kelly et al. 1992). The circumstances which present themselves in a project may vary from project to project and this might also have major influences on the approach a client will use in undertaking a project. Previous research has shown that large projects require a greater degree of information gathering than smaller projects and this affect the way the briefing process is conducted(Chen et al. 2006). In this case there is therefore a greater possibility of the project expectations not being met. Equally so, complex or unusually large projects usually require much more information, involve many multi-disciplinary professionals, and may therefore present greater challenges for briefing. Similarly, inexperienced client organisations may also find it relatively difficult to define their requirements in briefing (Kamara and Anumba 2001). With these considerations it is

plausible to suggest the right consultant project manager is likely to navigate these issues and deliver an effective brief (Atalah 2009).

2.5 Current briefing practices - the interrelated and social process in briefing

The various suggestions of best practice approach tend to agree on a number of things regarding the briefing process. One suggests the brief should be clear so that the number of possible interpretation is reduced to improved project controllability. The aim of briefing is to identify the client requirements and this is enhanced through good social cohesion between participants, in seeking to understand the client requirements. This includes interpreting the client for communicating to the design team. The terms communication and interpretation are commonly used to describe the process of understanding client requirements in briefing. The essential issues relating to the process flow of information and collection are explained.

2.5.1 The communication process

To manage projects successfully you need to communicate effectively. This is basically the backbone of the briefing process (Kelly et al. 2005) and the acceptable way for getting across ideas and exchanging views among stakeholders involved in the process.. In many respects this is between participants and can also include cross exchange between them and the organization. The influence of effective communication is usually on all aspects of the briefing process especially at the decision-making and implementation stages. Similarly the process by which information is exchanged depends on the medium best suited to convey the ideas; as such this can be done through having secure meetings or person to person contact (Bouchlaghem et al. 2000).

The briefing process which involves thinking and interpreting client issues also

benefits from effective communication in such a manner that understanding is enhanced. However there are areas of uncertainties, which are explained by the concept in concept of the 'Johari Window (fig. 2.6). In other words the briefing process can be said to have areas known and unknowns to the consultant project manager and client in the process of identifying the client requirements. In many ways these unknown are addressed in the brainstorming session in the briefing process.

	Known to self	Not known to self
Known to others	Open/Free area 1	Blind area 2
Not know to others	Hidden area 3	Unknown area 4
Fig. 2.6 Conceptual map of the Johari window <i>Source: Tyler 2007</i>		

The areas of the Johari window illustrated in fig 2.6 can be construed as representing personnel awareness in the four areas to suggest the areas known and unknown in the briefing process. For example, the area conceived to be the blind areas is utilise by the consultant for accepting feedbacks to aid identifying the specific project requirements. Undisclosed information falls in the private area and this is more related to information that the client decides to keep confidential. There is the dark area

representing the point where the consultant and the client will have to rely on feedbacks, the interpretation in this area depends heavily on their trait composition.

These thoughts are made known by the fact that the client and consultants have to interact often and therefore encourages disclosure and establishing feedback mechanisms for receiving critical information for the identifying the client requirements. Blyth and Worthington (2001) use the terms '*supply side*' and '*demand side*' to distinguish communication patterns for producing different types of briefs. In this they suggest the primary purposes of communication in the briefing process to be:

- *To get in formation*
- *To get a decision*
- *To share understanding*

It is suggested that during the strategic briefing stage, the communication from the demand side to the supply side is mainly concerned with the strategic issues in the client's business terms. From the supply side to demand side, the communication pattern is to respond to the strategic brief by exploring its meaning in terms of building in order to develop the project brief. Meanwhile, within the demand side, there is collective communication among all project stakeholders to discuss and formulate the organisation's business objectives and strategies. Within the supply side, collective communication among different professionals also takes place in accordance with the adopted procurement route. Basically, this supply-and-demand framework classifies briefing communication patterns into two dichotomous areas - the client's business language and the consultant's building language. It is argued that both areas have different languages used in their own specific context. Therefore, briefing communication attempts to bring both languages together in order to reconcile issues in the process. Ultimately, client requirements are translated by the consultant into building language that can be understood by the designer to be appointed. In addition, in

the light of this framework, Blyth and Worthington (2001) also argue that the client's limited expertise in delivering buildings makes them heavily reliant on the consultant to provide a specialist service to support their business needs. To some extent the process of briefing them becomes a process of reconciliation of two different areas of knowledge (Kao 2005)

2.5.2 Information gathering

The interaction and communication process is concerned with exchange of information; this information must be captured and represented in a form or order to be analysed and processed for the benefit of the project. This must now be synthesised to make possible correction to avoid any possible misconceptions.

The supporting mechanism of an effective briefing process is the information captured and the manner in which the information is collected and documented to provide the basis for analysing and developing the brief. . In meetings or face-to-face exchanges, the information is captured in the memories of the individuals present at the meeting.

As such the conception stage provides the opportunity for interpreting the information recorded and transforming them into tangible outputs, for making the client requirement explicit to the industry. Specified model are formatted in CIB (1997) and O'Reilly (1987) guides. These guides allow the client requirements to be made clear and in concise form.

Generally, the briefing process is like an information-processing entity, where all pertinent information on the client requirements are coalesced then placed under specific heading as determined by the format of the brief.

2.5.3 Interpreting the information

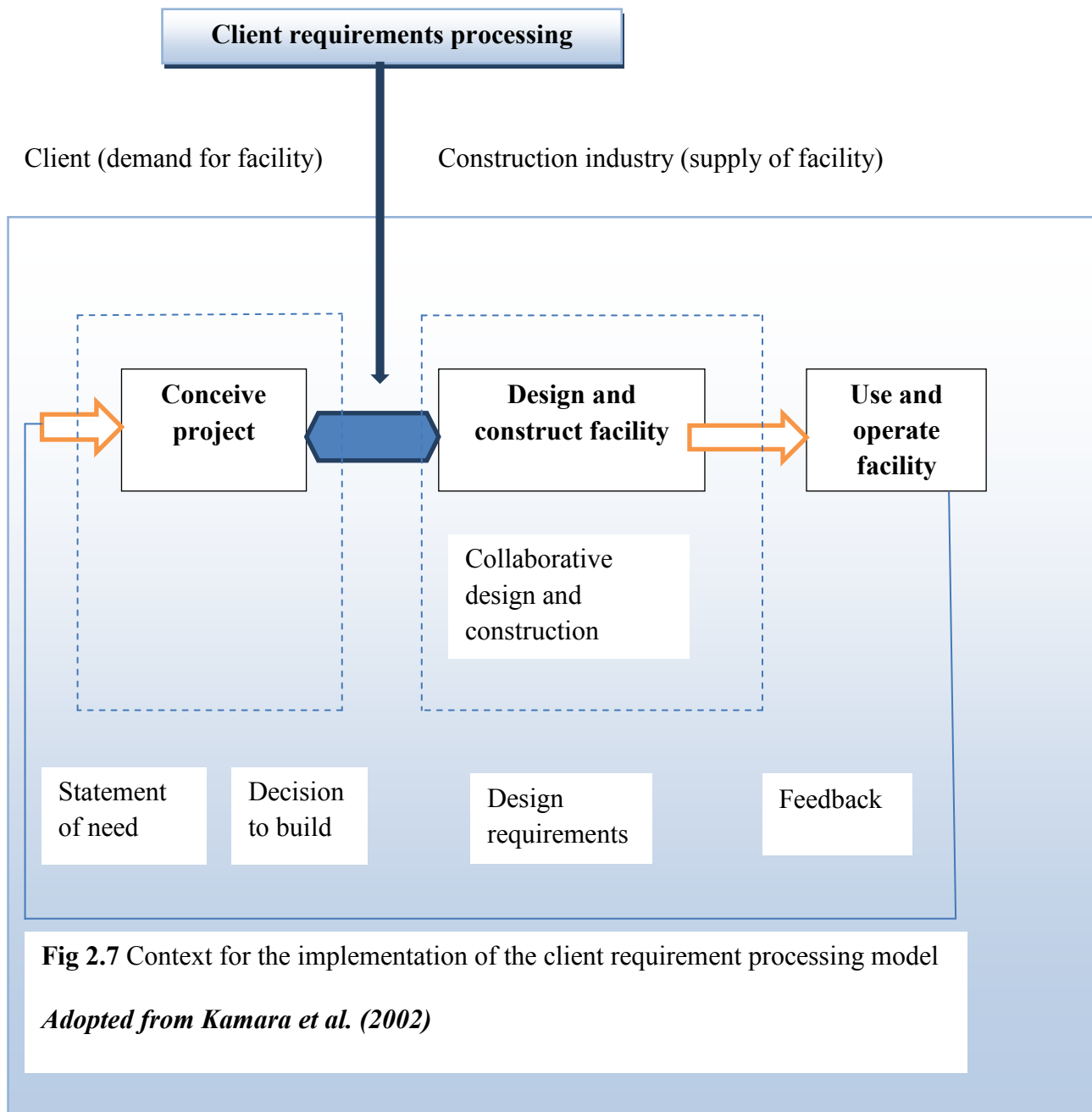
The way the consultant interprets the client requirements to produce accurate statement for the design team to function with is of much concern. Bertrand (1993) argues the importance of '*meaning*' in briefing and defines '*meaning*' as '*a process of interpretation, which provides a person with a repertoire that enables him or her to deal with environment*'. It is argued that all individuals have their own particular perspectives to interpret and translate the needs for a facility Bertrand (1993) further suggests that the application of ethnographic research, a '*descriptive study of group*', is helpful to explore the inquiry into '*meaning*' in the briefing process. It is an approach by which the consultant is able to understand the client's organisational culture and their requirements in depth. In this respect, briefing is regarded as an ethnographic research itself in order to inquire and mediate various meanings of client requirements that are interpreted by different briefing participants.

2.5.4 The decision-making process

This is an essential aspect of the briefing process as the decisions made set the tone for the process (Kelly et al. 2002), but an area much criticised in a project process (Barrett and Stanley 1999). In addition whilst a comprehensive brief is important, but not the end of the process (Construction Excellence 2004), the subsequent decisions made, for them to be effective, must be appropriate to the corresponding stage of the project development. The construction Excellence (2004) refers to these stages as the strategic decision where decision made here will have an impact on the following stages of the project, which impacts on the client decision to contribute resources to the project. During the decision-making process there are four behavioural factors that influence decisions taken one of which is our personality (Baker 2008). Blyth and Worthington (2001) contend that progress of the process has to reflect the decisions taken.

2.6 Conventional briefing practices

Conventional briefing developments are generally influenced by the complexities of the project and crucially the understanding of the client requirements. This is practised mostly within a defined framework of activities as contextualised in the model of Kamara et al. 2002 (fig 2.7). The model highlight the process requirements stages represented as the conventional approach which subscribes to and in many respect exemplified the established guides and perceived best practices recommended. Primarily this is based on the perception that the client requirements can be better identified when the consultant project manager follow these steps and guides. It is suggested that following this approach allows for effective requirement processing and monitoring of the staged development as the project progress. Current literature contends that conventional approach is too prescriptive, mechanistic and does not add anything new to improving the effectiveness of the process (Green 1999). As such the industry practices are more representative of a personal undertaking of the consultant project manager (Barrett and Stanley 1999). The model also represents the client requirement process to indicate the nature of the client organisation and the conflicts between project requirements.



This process is also designed with a focus on addressing the weaknesses in current briefing practices, as well as specifying the tasks for requirements processing in a

concurrent life-cycle design and construction (Kamara et al. 1999). Because current practices fall short of addressing the clients' requirement, the need for an overall change in approach is necessary. The approach therefore seeks to facilitate the effective processing of clients requirements deriving benefits to the client, the project team, and the construction process in a holistic way. In proposing the new and improved model Kamara et al. (1999) state that applying the quality function development (QFD) methodology in the CRPM facilitates the identification, structuring, analysis, rationalisation, and translation of explicit and implicit client requirements into solution-neutral specification for design purposes. However the use of the CRPM in "paper form" is potentially very time consuming and even though there are benefits it should be automated to be more effective, urging the need to use the system in other project life-cycle stages within the context of a procurement/contract strategy. Similarly the system as promoted needs to be further tested and more significantly there is the need for further validation by applying it to other categories of project and client types in the construction sector. It is another way of attempting a new model to identify client requirements. The proposed methodology used shows however that there is evidence that the CRPM provides a suitable framework for clearly processing clients requirements, shows significant improvements over present procedure and facilitate design and construction facilitates more accurately reflecting clients requirements in the construction sector.

2.6.1 Design based approach- the use of best practice advice

This is a design issue-based approach to resolve briefing issues by employing a matrix framework that is described as a compulsion to fill every box to ensure the information is complete and comprehensive. It is argued that this compulsive situation creates overloaded and useless information and an unnecessary restraint on the designer team (Kumlin 1995). In this respect, the design issue-based approach is suggested by

Kumlin (1995) to trigger the briefing process by '*design issues*' at the beginning, then to develop '*project objectives*' and '*project concept*' sequentially. This approach assumes that the essential attribute of the design function should be considered during the briefing process. Briefing should '*mirror*' the design process in order to facilitate design solutions. As Kumlin (1995) concludes, '*the design is the completion of the prescription, not the program (brief)*'. From this point of view, the purpose of briefing is not regarded as completing all information needed once and for all. Instead, briefing is developed in parallel with design. Both processes are iterative and interdependent.

Based upon the theoretical background of a hierarchical approach to design, Kumlin (1995) provides a hierarchy framework to distinguish '*design issue*', '*project objective*' and '*project concept*' in order to integrate briefing with the design process. Here, briefing is described as '*what needs to be done*' in advance to subsequently conduct design described as '*how to do it*':

- *Design Issues*: This refers to the statement of '*design fulfilment*', which contributes to the achievement of the mission statement. Not only explicit issues, but also some implicit issues, which affect the final outcome of the design, should be identified by the briefing process
- *Project Objectives*: These are defined as either qualitative or quantitative results to be achieved by the final design and construction of what the briefing process brings about. Each issue can generate more than one objective. The results should be measurable in some way, although subjectively

Project Concepts: These are the means to achieve project objectives, and the bridge between project objectives and design concepts. There can be many project concepts for each project objective. Often some project concepts are brought to the briefing process by the client's preconceived concepts or most of them are created and developed during the briefing process.

Furthermore, there are two parameters to clarify their definitions and relationships to each other:

- *A Hierarchy-generating system:* The relationship is generally presented in a hierarchy form, where each design issue is paired with one or more project objectives, and each objective generates one or more project concepts, as such each project concept should be able to generate many design concepts Duerk (1993) refers to this as the '*branching diagram*' where it focuses on starting the design issues first without the constraints from the matrix.
- *Level of abstraction:* Based upon the above hierarchical structure, the level of abstraction of terminology is used to distinguish their differences. The mission statement for design issues is at the highest level of abstraction, and then the level of abstraction decreases gradually following through the development of project objectives, projects concepts, and design concepts. The level of abstraction is determined by whether it is too narrowly stated to generate many ideas or concepts. Ideally, this principle tends to form a seamless continuum from the abstract to the concrete for a single idea.

Generally, based upon the theory of a hierarchical approach to design, the design issues-based approach establishes a linkage between briefing and design by identifying a set of issues, objectives and concepts for design. Both briefing and design activities start with the same considerations in order to prevent information overload. In addition, it is assumed that client requirements can be broken down rationally and specifically in terms of 'issues', 'objectives' and 'concepts' with the help of a hierarchical-generating system and their levels of abstraction. Basically, in the light of the design issue-based approach, the briefing process is able to reflect inversely the design process, then to resolve the dilemma of information overload and information sufficiency caused by the matrix method. However, the perception of the briefing process is still based upon the similar concept concerning the identification of the project objectives to guide the

design development.

2.7 Limitations of briefing practice

In failing to identify the client project requirements the consequences can be cost overruns, poor quality deliverable as it relates to the project outcome. In reality these problems are attributed to the limitation of the briefing process where capturing client requirements appear to be an elusive target. Researchers suggest this is generally a case of poor understanding on the part of the consultant project manager of what the client requirements are.

Other weakness identified by Barrett and Stanley (1999) from reviewing several cases in an industry, suggest gaps which contribute to the ineffectiveness or inability of the process to identify client dissatisfaction. These problems includes the following (Kamara and Anumba 2001; Barrett and Stanley 1999);

- Inadequate involvement of all the relevant parties to a project;
- Insufficient time allocated for briefing;
- Inadequate consideration of the perspectives of the client;
- Inadequate communication between those involved in briefing;
- Inadequate management of changes in requirements

These inadequacies (briefing) appear to be related to personality issues. It is suggested current briefing practice tends to be solution-focused with emphasis on sketches and drawings to define the problem. Although this can be interpreted as a difference in the method used to define the problem, a solution-based approach tends to shift the focus from the requirements of the client, to that of the designer(s) (Kamara and Anumba

2001).

These shortcomings do not necessarily mean that good or even excellent facilities are not achieved in practice. Barrett (1991) indicated that bad examples usually give good results sometimes. The main concern, however, is whether the desire of the clients and users are fully satisfied.

It is shown capturing those objectives does not mean a good and successful brief, as it is well known that though the best practice guides are formulated to assist professional in formulating the briefs (Palmer 1981; RIBA 1973) the consequences of limitations are poor outcomes because key aspects of the client requirements have been omitted and this contributes to client dissatisfaction.

2.7.1 Considering the implications of briefing limitations

The weakness of the process may suggest new and innovative approach to resolving the problems of briefing. These relate to the way current briefing practices are conducted, the involvements of key stakeholders, the skills participants bring to the process, value and sustainable management of the practices. However, key to achieving these standards is having the right individual for the tasks. As it is there appears to be too much reliance guides and best practices. With current briefing practices patterned after the ‘‘traditional’’ method of procurement, which is characterized by the separation of design and construction the traits of the consultant project manager is essential.

2.8 Conclusion

In this chapter the briefing process was reviewed extensively to gain an understanding of the essential point of construction briefing and the conventional approaches adopted by the consultant project manager for preparing the brief. In

particular highlighting crucially the extent to which the briefing process is hinged on the involvement of different personality interacting to identify and define the client requirements. Key to this was defining the briefing process and the brief, reviewing procedural approaches, relationships between key participants, current practices and conventional approaches and the limitations of the process. These were evaluated to gain an understanding of their impact on the briefing process outcome and determine whether considerations were given to understanding the implications of trait influence on performances based on the realisation that the process involves key participants.

It was discerned that the briefing process is key to project success, but it's developments and strategies are impacted by the complexities of the project(s) and crucially the understanding of the key issues by the consultant project manager. This suggests briefing is a personal process evident by the procedural approach. In terms of the procedural approach it is found that this is a recommended best practices option, which suggests a sequential approach to identifying the client requirements where each activity has a definitive and responsible approach. It is practised mostly within a framework of defined procedures and further suggests that the conventional approach adheres to the established guides and perceived best practices. The perception is the client requirements can be better identified when the consultant project manager follow these steps and guides. Blyth and Worthington (2001) argued that the benefit to be derived when briefing follows these stages in particular a two-stage process includes client satisfaction. However the conclusion is that following this approach allows for effective requirement processing and monitoring of the staged development as the project progress. With these structures in place the process of briefing then becomes mainly focussed on the outcomes at the project stage. The methodological approach does not to offers much insight on the participants competency, especially as it relate to the influence of thinking on the decision, nor do the approaches explain how briefing is actually conducted at the conceptual and other stage, nor identify the key areas of how the perceived limitations will be addressed.

Though importance is attached to the roles of the key participants in briefing, nothing specifically is said about the influence of traits on performance and the outcome of the process. Highlighting these issues brings to the spotlight the qualities of the consultant project manager of the process.

Even the checklist strategy to aid the various methodologies for the brief does not look at the process describing how the information is collected and collated into brief documents at the outputs of each stage of briefing. It is the same with many of the other approaches to improving the process for identify the client requirement. No explanation is given for adopting specific briefing methods.

From evaluating current practices of briefing, it seems that the process is conceived broadly in the absence of a cohesive perspective and although a number of attempts for briefing improvements are proposed, most do not represent any new conceptualisation or radical change to the information-processing perspective. In particular, in the absence of any coherent guiding theory, current perceptions of the briefing process fail to provide a convincing explanation of the insight of the briefing process in detail.

The conceptual insights and ideas garnered provided the theoretical foundation for future work to put forward new concepts and approaches. In summarising the theoretical research work done to date there were a few striking conclusions, first is the fact that current briefing practices still have severe limitations and despite the numerous studies to address these limitations the process is still considered inadequate.

The second is that it can be conceived from Barrett and Stanley (1999) the need to look at personality issues as the way forward, thus the suggestion that the human dimension should be consider in future research. Too much emphasis is on experience alone and as yet to exploit the potential of trait to assist in improving the briefing process.

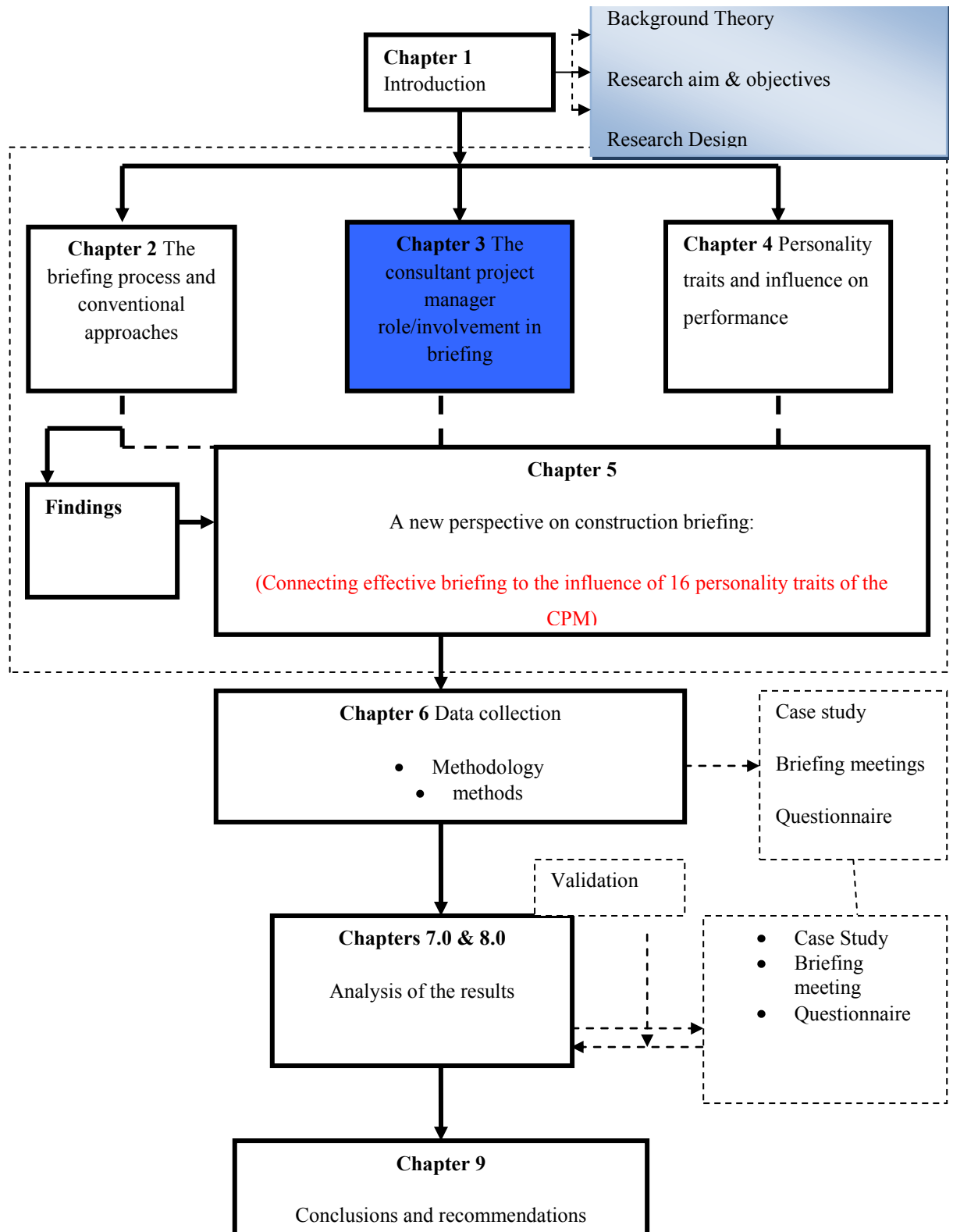
Another conclusion drawn is the industry clients do regard personality as essential.

Implicitly this is referred to when they seek the services of consultants, but they generally speak of specific attributes, especially related to projects. This is further discussed in the chapter 4 and 5 on trait influence on performance and the problems in advancing the new perspective on construction. In this is the opportunity for shifting the focus from developing best practices and guides to individuals who are to undertake the briefing process. Focussing on the consultants with specific traits has the potential for achieving the desired effect and this also provides a useful and viable approach to overcome briefing problems evident in studies conducted several decades ago and still present in today's construction industry.

We cannot overlook what the literature has highlighted, that clients inadvertently focus on traits in their selection of consultants. There will always be the need to improve current practice, but this has to begin by first understanding what is currently happening in the industry to be able to focus on the causes.

Interest in the consultant project manager traits or soft skill has been attracting much attention from academic and professional alike in recent times. Clearly much focus and effort should be concentrated in these areas. The conclusion is there still remain the needs for an improved briefing process.

Chapter 3 The Consultant Project Manager Role in the Briefing Process



3.1 Introduction

The purpose of this chapter is to investigate the consultant project manager (CPM) involvement in the briefing process and roles in delivering an effective process. On the basis that the consultant project manager tasks can be understood within a continuum of coordinating efforts, taking ownership and managing the process an understanding of the consultant project manager involvement and role in the process will be achieved by means of a review and appraisal of the salient point of the relevant literature of recent and contemporary writers on the subject of consultant project managers in construction briefing management. Based upon the perception that the consultant project manager, in the briefing process is working under a contractual framework with specific terms of reference, while interfacing with clients, and other stakeholders, the various issues relating to the role of the consultant project manager in identifying and defining the client requirements are reviewed under the following key areas; CPM involvement, CPM for the briefing task, the CPM filling a gap in the process, the correlation between softer skills and performance, organisational policy for engaging CPM and measurement of the CPM performance.

It will be found that the consultant project manager's involvement in construction briefing, especially as it relates to identifying the client requirements is impacted by personality traits. Taken as a whole, an overall picture of the consultant project manager involvement in the construction sector in the context of influencing the direction of the briefing process is presented.

3.2 The consultant project manager involvement in the briefing process

It is established (Chapter 2) that the brief is the key document which emanates from the process and serves to guide the design and construction phases of the project process. Such guidance is through the definition of the client project specifications

which serve as the reference, while setting the foundation for the design team in the execution phase. As such the job of the consultant project manager in the process can be demanding, complex and varied, requiring the juggling of several issues concurrently (Pant et al. 2007) and navigating through many uncertain situations which can be attributed to varying project size, type and complexities of information, which is integral to the process.

Such are the issue that the role of the consultant project manager in the briefing process is readily expressed as closely associated with the approach of identifying and defining the requirements to communicate to the design team. Brought on board because of his (her) perceived speciality the client expectation is the consultant project manager will take ownership of the process, but more importantly juggling several activities in the process and providing interface between the consultant and client during the process of defining the client requirements(Frank 1990). This involves taking ownership of the process and determining whether the client needs are the solution to the client organisational problems. These issues generally influence the approaches of the consultant project to work (Crawford et al. 2004).

In light of the reality that the consultant project manager job is be best describe within the continuum of integrating and changing roles, with increasing sophistication, decisions therefore will vary as a result of the level of complexities and uncertainties (Mastrandrea 1986; Galbraith 1973).

These situations require a measure of wisdom. The consultant project manager presence therefore can be recognised as a credible source of information and wisdom to exert a measure of authority over participants and stakeholders in the process (Mastrandrea 1986). In such circumstances the consultant project managers must maintain a macro view of the client requirements in order to define the key issues of importance for completing the process satisfactorily. This may call for traits which are identified with such sensitive issues. In particular when working with different

individuals in the briefing process, means managing different personalities which is an essential requirement for delivering effective briefing (Yu et al. 2008; Barrett and Stanley 1999). Because these circumstances can quickly generate into difficult situations for management, even at the point at establishing relationships, among team members with a positive outlook, it is important to appreciate the nuances of the situation. Such issues are vital for supporting a shared understanding of the client project requirements and overall effectiveness of the process.

Over the years clients have been engaging external consultant project manager on a regular basis to undertake the task of briefing (Boyd 2006), because of the conviction that he/she is coming from outside the organisation and will be bringing new ideas from a professional and independent standpoint with no biases (Franks 1990). This approach represents a change from past practices. In the past the briefing process was conducted largely by internal consultant project manager or by one or more of the functional disciplines connected with the project (e.g. Architect, Engineer), where biases tended towards the functional discipline from where he or she was drawn (Mastrendrea 1986). However, because of these biases and the failure to capture the requirements, the trend is more towards engaging external consultant project managers with the expectations of quality performance (Boyd 2006) and this trend has continued because more projects are oriented towards creating a demand for good and efficient consultant project manager.

3.3 Selecting the consultant project manager for the task

The level of uncertainties experienced in a project may present its own challenges. This has oriented towards engaging consultant project manager with the capabilities and skills to navigate through these issues successfully (Mastrendrea 1986). Importantly, the extent to which the consultant project manager can be described as effective also involves how he/she handle the increasingly complex nature of the issues

involved in the briefing process, especially as it relates to the differing project sizes, types and orientation of projects (Green 1992).

Pant et al. (2007) contend this requires a changing skills set and client are seeking individual who possess these skills, and can respond to the challenges presented. In particular the consultant project manager with the ability to adapt to the changing situation (Pant et al. 2007) including displaying the right orientation for the job. Previously the process of engaging relied on established relationships between client's organisation and consultant project managers, therefore there was no need to look for alternatives. In some cases, word-of-mouth recommendations were satisfactory. There are also instances where client relied on proven procedures and may introduce fresh approaches such as personality assessment at various occasion. This arises from the need for competent advice at an early stage of a project, coupled with innovative designs which are essential for selecting the right consultant project manager. However, despite the method employed to make the final selection, it is argued the process should be conducted after the services required have been defined. Thereafter the process is formalised with a formal agreement which sets out in detail the expectation of the client and with both parties signing off to the conditions. It is normal for the client to write formally to the selected consultant advising of the award of the contract.

The letter, termed the Letter of Acceptance, indicates what has finally been accepted, both in terms of scope of service and sums, as well as the legal framework for the Agreement (Mastrendrea 1986). These issues shows that the scope of the consultant project manager work can take two forms. For example, in the first form, a client may have a problem, or at least may require a solution to a problem, the nature of which is not known or defined at the time a consultant is engaged. Secondly, the consultant project manager needs to engage the client to work together to agree on the requirements at which time the consultant project manager will be assessing whether the client requirements are the solution to the problem. Generally the client side defines the scope, services and deliverables required and these are the performance indicators for

the consultant project manager to achieve to satisfy expectation. The effectiveness of the tasks has a bearing on the outcomes.

Clarke (1990) suggest the way to employing the consultant project manager to provide the optimum performance is through profile assessment from other clients who have experience on previous project. Thereafter the allocation of responsibilities would largely be through negotiated agreements at the start between the clients and consultants. In this way the advice is suggested to be impartial on appropriate forms of project organisation and agreements.

At this point you might think the consultant project managers with the experience of some project which otherwise may have fall outside the domain of the briefing requirements is suitable. However since different consultants have different services to offer, it is worthwhile exploring beforehand the options available rather than taking on the first likely consultant and assuming that they all offer much the same.

3.3.1 The task of the consultant project manager in briefing

The tasks of the consultant project manager in the briefing process which is said to include co-ordinating the work of different individuals can also pose many challenges, including overcoming psychological barriers (Heinstrom 2003). As such, the first and foremost task is, bringing together different individuals to work in teams, while encouraging social interaction among each other to identify and define the client requirements for the design team. It therefore comes down to taking responsibility for the overall process, ensuring a strategic balance is achieved between the objectives of the project and the client requirements (Bennett 1983) to the satisfaction of the client.

The strategic balance is about weighing up the various issues involved in the process so that they lead to achieving the client requirements. Such issues involve positioning the process towards the determination of the project goals in terms of what are the key

issues that will ensure the project phase is achieved within cost, quality and time considerations. This can extend to include decision-making and co-ordinating of the entire process (Galbraith 1973 and Handy 1981). Indeed, the best consultant project manager is often the person who can, by reason of his own expertise in the area in which the project is exposed to its greatest uncertainty makes the correct decision (Mastrendrea 1986) and these are the hallmark of an effective briefing process.

It is the expectation of the client that the decisions of the consultant project manager will ultimately impact on the outcome of the briefing process, and so at the inception stage the decision will be related to issues such as whether the client request is explicit and clearly understood, because this has an influence on the approach to be implemented to identify the client requirements.

When the emphasis is on quality and client satisfaction, the role of the consultant project manager also includes bridging gaps between competing parties. The consultant project manager task therefore is also about bringing realism, among other benefits, that may be lacking internally (Bryde 2005)

3.3.2 The nature of the issues facing the consultant project manager

The nature of the consultant project manager tasks in briefing also requires accurate interpretation of the client information to aid meeting expectation. This is essential for the brief development and is premise on having an effective approach for sifting through a series of complex information. Essentially considerations should be given to environments (that is, the settings), as part of the framework setting to facilitate the process, where influence is exhorted. Key to this is the workshop arrangement for brainstorming the client issues in the determination of the requirements. Fig 3.1 provides a conceptual map of how the consultant project manager influences the process.

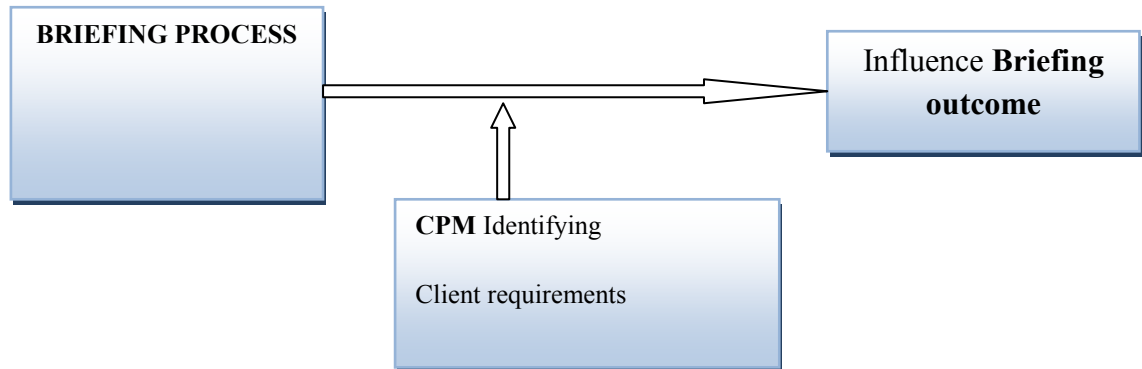


FIG 3.1 A CONCEPTUAL MODEL OF THE CONSULTANT INVOLVEMENT IN BRIEFING

One of the benefits of the workshop setting is the opportunity for establishing good interpersonal relationship, which is a key ingredient for good briefing (CIB 1997). It also encourages good social interaction among stakeholder which enhances team work and interpersonal relationships.

Because the nature of the briefing problems are related to poor, or lack thereof, of understanding of the client core business issues (Barrett and Stanley 1999), the workshop setting can contribute to overcoming barriers ,foster better organisations and generally sets the scene for addressing these issues. The issues are most likely conceived within the framework of competencies and taking active control of the process allows the consultant project manager to decipher the process to find the solutions to the client problems (Clarke 1990). That said clients seeks the involvement of the consultant project manager at this stage of the process to pursue a path which offers the best means to achieve the project and organisational goals (NEDO 1983).

Finchman et al. (2002) writing in an article on the consultant project manager role suggest there are some features of the consultant project manager work which are important for our understanding and should be emphasised at the outset. Firstly the

consultant project manager is an independent service provider which represents a detachment from the client organisation (Clarke 1990). Secondly, the consultant project manager role is of an advisory nature and the responsibility is for the quality and integrity of advice, and though there are variations of different kinds, giving advice is essential, especially the right advice. This must be in the right way and at the right time, which ought to be a basic skill of the consultant project manager.

Further Clarke (1990) infer that the nature of the consultant project manager's work is essentially understanding the client needs and such understanding is aided by the knowledge gained from working in varying management situations, in addition to acquiring skills needed for problem solving.

Though this might appear to be quite simple, not all consultant project managers have the background experience suited to managing all types and sizes of project and likewise the briefing process. According to Sharif et al. (2000) experience gained from working on similar project briefs should assist the consultant project manager. But clearly given the enormous effort needed for developing the briefs, especially in complex projects (Boyd 2006) the presence of an experienced consultant would likely enhances the prospect of developing an effective brief. It is argued that only through employing the consultant project manager with the right qualities would allow for exerting influence on the direction of the process (O'Reilly 1987). However it may be a grave error to assume that once a consultant is brought in, the difficulties experienced is over. Consulting is generally difficult, systematic and requires disciplined work based on the analysis of hard facts and the research for imaginative but feasible solutions (Fincham et al. 1999).

3.3.3 Briefing and the organizational change process

The involvement of the consultant project manager can also evolve out of a need

for a project. Employment is normally part of the organisation long term strategy and more and more it is accepted that the briefing process, which is part of the project development process, is essential for supporting the organisation initiative beginning with the project conception. Though this is integral to the change process true benefit of this change relies on the expert management process of the consultant project manager in the process of implementing the strategies (Galbraith 1973). To this extent clients seek the involvements of the consultant project manager to gain from their expertise. This is not to say there will be no variations in outcomes and client may not suffer losses, because of a lack of the expertise to fully implement the process. However the involvement of the consultant project manager on the basis of expert knowledge will potentially overcome this variance and can contribute to the client organization true benefit in the form of expert knowledge. There are also cost considerations involved, unfortunately while many client organizations are focused on improving core business performance, the process of understanding the cost implication, strategic alternatives, contract issues and methodologies for implementing such change at time can often be overlooked, either because of a lack of this expertise (in-house) or because there is a time constraint. These forms part of the challenges the client is faced with. These situations can manifest themselves in the construction briefing context (new projects) where there can be greater challenges at the brief development stage which require careful assessment of the core business issues. In such cases the implications can be failures. The engagement of consultant project managers at the beginning of the project therefore is where the consultant proactive role adds value for the project briefing team, including other stakeholders.

The way the briefing process is conducted appears to have many connotations for the construction project manager, because although the consultant project manager brings an independent perspective the issues which present the greatest challenges to him must be seen within the context of those affecting the client core business, and these issues must be quickly fused together thorough understanding to address expectations of the client. Typically some elements in moving the process forward can

be potentially confusing, even in the association between the client, consultant and other stakeholders. Therefore a critical component of the briefing process must be on understanding how to coordinate the dynamism of the relationship. While at one level consulting can involve a set of ideas, which increasingly seems to define managerial subjectivity and identity (Clark 1990) on the other-hand the analysis of all of these issues are made more difficult by the fact that the activities themselves seems to be always transforming.

Throughout the briefing process the client-consultant relationship is evolving, and if particular attention is placed on the core activities of the work, then we can think of the client-consultant relationship in its simplest form as one person helping another. The very essence of the consultant-client relationship focuses on seeing the project issues addressed (Schein 2002).

However since the aim is to help the client, and whereas connotation of help is suggesting the organisation seeking something and that organisation is being placed briefly into a dependent position, the real goal, then it is for the consultants to understand the potential traps along the way and should position himself to help client organisation understand and avoid them (Schein 2002; Clark et al. 2000).

3.3.4 The consultant project manager - a specialised service provider

Procuring the service of the consultant project manager is guided by the regulations for public procurement of management consultants (Lindahl et al. 2006). This legal framework is established for ensuring engaging management consultants remains within the law in relation to purchasing professionals services (Werr 2003) and this is beneficial to both client and the consultant. To the consultant there are working with a contractual framework and for the client a legal basis is established for engaging the consultant. There is however a more common and rational approach, which involve

a sequential process that follows established purchasing procedures for searching for alternative suppliers and contracting, and ending with execution and evaluation. Each of these steps, however, involves specific challenges when it comes to management consulting services which are said to be unique in terms of service characteristics, knowledge base and purchasing situation (Clark 1999; Mitchell 1975).

However, this can be complicated by the fact that clients are often unable to properly define their problem and thus their detailed needs (Schein 2002; Kubr 1978). Once clients had established a previous relationship with a consultant, the main tendency is to reuse this consultant (Edvardson 1990). When it comes to evaluating alternative suppliers, most studies indicate the importance of “soft” judgmental variables that make the systematic and objective comparison proposed difficult. Gummesson (1977) describes clients’ hiring of consultants as similar to recruiting an employee where experienced buyers purchase the services of individual consultants in whom they had prior relationship and confidence and not those of consulting companies.

3.4 The consultant project manager filling a gap

The inconsistency in briefing outcome suggests the need for further investigation. It is suggested another consideration for engaging the consultant project manager is to fill a gap created by the often-inconsistent briefing outcomes from some brief writers. This is construed as a weakness in current briefing approach. The growing awareness of the importance of the briefing process requires such weaknesses to be addressed which have open the way for the influx of the consultant project manager for conducting the briefing process. To the extent that this is an area requiring special consideration has given rise to opportunities for consultant project managers to extend their work in the industry. Increasingly companies are relying on the consultant project manager to develop functional brief to deliver their projects and enhance performance,

also to realise the true performance of the project thereby achieving value for money (Rezgui et al 2001).

Mastrandrea et al. (1988) contends the consultant project manager has extensive cross-functional experience and skills to enable addressing the problematic issue in projects. Interestingly Mastrandrea (1986) sees the consultant project manager as an independent person bringing new perspectives to the process. The context of the briefing process would suggest these key skills are essential owing to the nature of the activities involved, and in particular the need to addressing uncertainty, where taking risks and skills are part of the task in identifying the client issues. Effective management therefore is critical to the extent that it indicates a process to follow in a specific path to success (Soderland 2004). These features of the briefing process would necessitate wide background knowledge of the key issues to contribute to the transformation of a process to exhort the change necessary in briefing and design.

Sunindijo et al. (2007) suggest the work of consultant project managers wrote that to implement change successfully the consultant project manager should possess personality traits which influence understanding the client issues, and more particularly specific traits constructs which have a major impact on performances.

In the contemporary school of project management these issues have been articulated to include the human characteristics of consultants (project manager) as key to influencing the dynamic and changing project environment, and personality traits have been accepted as a contributing factor (Hartman 2008).

One aspect of the construction project manager remit is having overall responsibility for the successful initiation, planning, execution and closure of the project (Haughey 2008). The expectation is to draw from the experience and specific knowledge gained from working with other clients. Similar challenges are expected which requires careful assessment of the issues to guide their deliberations. According to Clarke (1990), having been called upon to play a variety of roles in the industry the

consultant project manager, using the knowledge and techniques gained, can assume five basic roles: expert, manager, researcher, counsellor, and politician. These qualities are helpful in the briefing process. As an expert, the critical role is necessary in the consulting process to aid in the interaction with the client, as the provider of skills and knowledge the clients would expect the consultants to be able to speak with appropriate expertise in their specialized area. Secondly, the role of manager requires specialised skills to manage or control the assigned project. In the role of a researcher, the consultant accepts the responsibility for obtaining, analysing, and interpreting objective data in a scientific manner. Invariably in a counsellor's role the consultant should assist the clients in learning and imparting knowledge through formal methods and subsequently assumes responsibility for the client's learning process. Finally, the politician role of the consultant is enacted by understanding the sources of power in social systems and by gaining the support of those who have the power and influence to facilitate or inhibit change.

The general conception is in order for the consultant's expertise to be instrumental in solving the client's problem; he or she needs to mobilize various skills or competences that have the appropriate mix of competences, notwithstanding that the process of engagement needs to be carefully assessed owing to the fact that success is linked to individual abilities.

3.4.1 The need for engaging consultancies

Because of the shortcomings in current briefing practices, which have increased the possibilities for using the professional services providers. The positive impact effective briefing has on project outcome is noticed in the way projects are managed and how problematic issues are handled (Clarke 2000; NEDO 1983). Such issues have been shown to be handled in an unbiased way and much has been said about this. It is argued that the perspective the consultant project manager brings, is because of coming

from an independent discipline in the consultancy sector (Fincham et al. 2002) and fulfilling a role independent of the client organisation. The continuing line of specialist providers of consultancy service stands in stark contrast to the inconsistent brief writers, thus benefiting the organisation through the providence of new skills and innovative ways to address the organisational issues as they relate to problem solving and analysing.

The essential points are the in-depth interaction with client in a process that clearly defining the issues to be addressed (Kubr 1978). According to the Institute of Management Consultants (2002) as a service provider the service provided is generally from independent and qualified professionals with the capabilities to recognise the problems concerned, and in accordance with client –contractor relationship able to identify the issues and derive solution for implementation.

The point is that when it comes to the work, the consultant project manager is presenting himself or herself as a representative of a specialised service provider, to which the clients can reflect on if they feel the need for assistance in problem solving. Because of such representation the consultant's work can be said to begin with some existing condition in the client's organisation judged to be unsatisfactory and capable of amelioration. It ideally ends with a condition in which a change has taken place, a change that must be seen by the client organisation as an improvement (Clark 1990).

In this way the client organisation accepts the consulting service to be of primary importance in that a service is provided from a professional entity equipped with the knowledge and skills relevant to practical management problems. Further the consultant's work is benefiting from the experience gained over years of work in organisation on many complex projects. It provides the basis for new techniques to be experimented on to supplement knowledge base while facilitating the application of experience from previous assignments to handling the new assignments skilfully. Because the consultant project manager would have been continuously keeping abreast

of developments in management methods and techniques, including those that take place in academic and research institutions, this makes the clients aware of developments issues requires satisfying their requirements (Kubr 1978).

By virtue of the nature of planned changes, construction clients would have come to recognise that new skills, values and qualities lacking in their own organisations were needed and convinced or persuaded that traditional structures, systems and cultures would no longer do, inducing the changes quickly and fundamentally. This meant that the designing and managing of change, and working in the change organisation, required new skills.

The issues about client expectation not being met and the resulting dissatisfaction experienced as a result of the limitations of the briefing process, the consultant project manager involvement can be seen as representing a new approach where the main thrust is on providing professional service to the sector. This interaction has many facet, including both cooperation and knowledge transfer in the client's interest (Clark 1990). This helps him to analyse and solve practical problems and transfer successful management practices from one enterprise to another.

However, even with the success organisations enjoy from engaging consultants it would be a grave error to assume that once a consultant is brought in, the difficulties experienced is over. On the basis that consulting is and can be generally difficult, systematic and careful work guided by disciplined work based on the analysis of hard facts to which are derived imaginative and feasible solutions (Fincham et al. 2002) there are time when outcome can be ineffective, to which focus must be given to engaging the right consultant.

3.4.2 The consultant project manager bringing an external perspective

The consultant project manager coming from a consultancy indicates both the

industry and practice of helping organisations improve their performances primarily through the analysis of existing business problems and development of plans for improvements (Sturdy et al. 2004). They provided a diverse range of service including human resource management and logistics (Jang et al. 1998). As a service provider(mentioned above) the deeper connotation is helping (Schein 2002), and for the client organisation, it is the opportunity for the organisation to gain external and objective advice and access to specialised expertise. Because of their exposure to and relationships with numerous organisations, consulting organisation are also said to be aware of industry “best practices”, although the transferability of such practices from one organisation to another may contribute to varying outcomes depending on the situations under considerations.

In other words consultancies working with client fulfil a role independent of the client organisation perpetuating a continuing line of specialist providers of service, by employing new skills and innovative ways to address organisational issues relating to problem solving and analysing of other organisational issues, but whose performance can vary depending upon the situations (Fincham et al. 2002).

One of their strengths in evaluating problems is the in-depth interaction with clients to clearly define the issues to be addressed (Kubr 1978). The Institute of Management Consultants (2002) recommends the use of independent and qualified professionals by clients in organisation, especially when the issues to be addressed are related to organisational policy and matters that requires appropriate actions for implementation.

However although the Institute of management consultants(2002) generally recommend a procedural approach for achieving the objectives of consulting, they also impressed that these procedures must coincide with managerial and operational functions that focus on coordinating and controlling internal and external resources to achieve performance standards and these are measured by meeting time, budget and technical goals.

The dynamic and revolving nature of projects in the construction sector would suggest to solve organisations problems requires an important element to support managerial and organisational function. A structured framework must forms part of the consultant strategic procedure to coincide with the changing circumstances (Institute of management consultants 2002). Clearly such issues are important if consultant project managers from consultancies are to function as strategic leaders whereby responsibility for the business of the project from the inception stage within a strategic framework and operational issues are to remain the focus of the consultant.

In evaluating the consultant project functions and strategies for relevance to specific project (Schein 2002) concluded that the consultant role, especially in knowledge is significant because of the emphasis on helping to shape, influence and control activities across a wide spectrum of organisational management. This highlights the decisive nature of the service performed by the consultant as implying that part of their function is in convincing the clients of the benefits of their ideas and solution orientation which is a vital part of consultancy work (Weir 2003). Essentially is the hallmark of consultancy, which relies on taking active control of the process by which images, impressions and perception forms part of the process (Clark 1990).

3.4.3 The benefit of external perspective to briefing- bringing new skills to the process

The clients would have seen no reason for requiring the services of the consultant project manager if he could not provide something that is missing in the organisation briefing strategies and has the skills to deliver an effective process, satisfying the objectives (Kubr 1978). These attributes would likely contribute in a way that emphasising the critical matters of importance that would contribute to the organisation change management process.

According to Fincham et al. (2002), the general rule in the industry is that consultants are used for one or more of several reasons, including providing specialised

knowledge and skills, supplying intensive professional help on a temporary basis that gives an impartial outside viewpoint while providing management with arguments which justify pre-determined measures. The reasons may be present in such varying degrees and may be so inter-related that the consultant is confronted with quite a complex situation at the project briefing stage which requires his endeavour to maintain a clear view of the reasons for which his services have been engaged.

In contrast to other phases of the project, the consultant project manager's involvement in the briefing phases is similar to being involved in all sectors where management problems exist and have to be solved. This brings into focus their performance and places it under greater scrutiny (Block 2000). In the large organisations with considerable management experience and specialist staff in various management functions and techniques, they employ the consultants for reasons of problems solving and innovation. On the other hand small enterprises tend to be a bit hesitant when engaging their service. The scrutiny that the process goes through ensures benefits are derived, because of the presence of the consultant. It is also observed that this presence brings about, to some extent, a change in attitude of the smaller clients. As such a growing number of small enterprises in both industrialised and developing countries, are utilising the services of the consultants more regularly, especially for project matters requiring the introduction of specific management techniques (Kubr 1978).

Having defined the benefits of the consultant work to the organisation it is important to note that there is no ideal, against which every consultant project manager could be compared, but there are certain common characteristics against which the success of his(her) work and the job satisfaction derived can be measured. These common characteristics differentiate the consultant project manager's work from other consulting profession and other occupations that also require a high level of cognitive experience, technical knowledge and skill, but have other objectives and use different methods of action. In much of these circumstances particular importance is therefore

attached to the softer skills, especially as they relate to the behavioural skills (area), when conveying the need for change and the way to implement change. These skills, qualities or characteristics include strategic thinking, influencing, and leadership (Chen et al. 2006). Importantly, there are instances where the role of the consultant project manager changes according to the complexities of the project (Masterandrea 1986). This suggests that the skills needed to perform well may also be anchored on behavioural characteristics.

In general, the behavioural characteristics as identified by the APM body of knowledge (5th Edition 2005) defined these as the elements that separate a person's preferred way of acting, interacting and reacting in a variety of situations to complement knowledge and experience, as a function of values, beliefs and identity. These qualities therefore include a combination of knowledge, experience and behaviour. Norman (2004) went on to identify eight behavioural characteristics of importance for the project management as; attitude; common sense; open mindedness; adaptability; inventiveness; prudent risk taker and commitment, to suggest the consultant project manager qualities can be considered as an extension of these qualities. As a consequence a summary profile of the key influencing characteristics or traits of the consultant project manager which influence performance could be defined as follows (P.W. Shay2000):

- Good physical and mental health
- Professional etiquette and courtesy
- Stability of behaviour and action
- Self-confidence
- Personal effectiveness (drive)
- Integrity (the quality that engenders trust)
- Independence. (The successful consultant must be self-reliant, not subordinate to the opinions of others .He must be able to form his own judgements in the areas

of his competence and experience. At the same time, he must recognise the limitations of his competence, experience, and judgement)

- Intellectual competence
- Good judgement (the faculty of sound appraisal with complete objectivity).
- Strong analytical or problem- solving ability (the ability to analyse, assemble, sort, balance, and evaluate the basic factors of problem situations of different degrees of complexity).
- Creative imagination (the ability to see with a fresh pair of eyes).
- Skills in interpersonal relationships.
- Orientation toward the people – aspect of problems.
- Receptive to new information or opinion of view expressed by others.
 - (a) Ability to gain the trust and respect of client personnel.
 - (b) Ability to enlist client participation in the solution of problems.
 - (c) Ability to affect a transfer of knowledge to client personnel.
 - (d) Ability to apply the principles and techniques of planned change.
- Ability to communicate and persuade (with above-average facility).
 - (a) Oral.
 - (b) Written
 - (c) Graphic
- Psychological maturity. (The successful consultant is always ready to experience people, things, and events as they really are with their unique individual characteristics; to view them in perspective and to take action needed in a calm and objective manner without being diverted from a sound, logical, and ethical course by outside pressure.)

These characteristics supplement the intuitive ability of the project manager in situation of briefing (Norman 2000). However, finding the match between the client needs and the project requirements in the briefing process is an important task of the

consultant project manager, especially in the early stage of the briefing process, because different relationships stages demand different skills, different.

Similarly the process of interpreting personal characteristics influence requires careful analysis, because some characteristics may be considered as necessary to influence effectiveness of the consultant project manager, while other may not.

3.4.4 The correlation between softer skills and performance

Performance can be construed as behaviour (Crawford and Pollack 2004). It is something which defines individuals and separate performance from outcomes. As far as behaviours of individuals is concerned, the schools of behaviour, traits, emotional, competency, intelligence, style and competence argue that it does not easily relate to competencies and outcomes from individual but outcomes are the result of individual performance. However because a consultant project manager must have skills in addition to other attributes to succeed, it is argued that these skills are soft and have to do with getting things done(Lorenz et al. 2004). Further these soft skills are personality oriented.

The point being advanced is that success and overall performance are characterised by traits which distinguish good leaders from the not so good leaders (Hartman 2008). Bedingfield et al. (2008) appear to highlight traits as the most prominent of the characteristics when evaluating the behaviour and influence on project manager in work situation.

In the literature on personality traits the schools of thought, especially the trait school on the behavioural, contingency, visionary, emotional intelligence and competency qualities of the consultant, contend that in a general management context the consultant project manager's leadership has an overarching effect and influences on his performance (Zaccaro 2001). Because there can be a changing perspective of what

constitutes project success, Muller and Rodney (2007) focused on thoughts the application of tools and techniques and more recently on risk management. However research has been focussing on the softer issues, especially those from the trait school have seen the consultant project manager as a leader who exhibit traits which they are born with and which defines good leader from average leaders. The behavioural school on the other hand in addressing roles assumes that effective leaders display given behaviours or styles, which can be developed. Mostly the behavioural school assume different behaviours or styles are appropriate in different circumstances, and this was formalized by the contingency school. Turner(2006) in reviewing the work published by the Henley Management College, identified seven traits of an effective project managers he named them; problem solving ability; results orientation; energy and initiative; self-confidence; perspective; communication; negotiating ability. However, he did not consider whether different traits would be appropriate on different types of project

As one of the prominent schools, the visionary school identifies two types of leaders to which the construction project manager can be distinguish, those who focus on relationships, communicating values, and those who focus on transformational and transactional leaders.

According to Kirkpatrick and Locke (1998) what differentiates leaders is not their intelligence, but their emotional response to situations. Koelmans 2004 believe that effective leaders show common traits which are found in project a manager who exalts self-confidence and self-belief, arising out of their experience as a project manager, influenced by their perception of success. As a rider, the competency school believes effective leaders exhibit certain competencies, which encompasses all the previous schools. They see traits and behaviours as competencies. Some literatures on project management support in a very limited circumstance that different leadership styles are appropriate on different types of projects.

Handy (1981) who desegregates the various theories of leadership into trait theories have established that Trait theories seek to establish the distinguishing characteristics of successful leaders such as initiative and self-confidence are what is needed at the briefing process.

Focus is also placed on conceptual skills as it was Godwin (1993) who defines it as the ability to see the process as a whole and recognise how the various functions of the client organisation depend on one another and how changes in any one part affect the other." In applying these scenarios to the project manager role the point can be made that it is crucial to project success that the project manager is in a position to conceptualise all elements of the project situation and the extent to which the elements interact with each other. The conceptual skill of the project manager is important at the planning stage of the project when the basic planning tools are discussed. It is also important during the implementation of the project. When problems arise, he or she must be able to analyse these problems from a systems perspective, taking into consideration the impact of each possible solution on all aspect of the project. The lack of conceptual skills on the part of the project manager is a common cause of implementation problems and sometimes of a complete failure of the project.

3.5 Organisational policy for engaging consultant project managers

The interest in consultant project manager for the briefing process (CIB 2004) would suggest, that among client organisation the focus is on hiring external consultant project manager as part of a strategic policy designed to add an expert temporarily to their staff. It appears to be a universal principle and according to Boyd (2006) and Masterndrea (1986) it is a mean to assist in meeting and satisfying client expectations. The point is that when it comes to satisfying expectation they are working under strict terms of reference with the key performance indicators defined. Such clarity in the briefing process, contributes to an understanding of the core business to determine

whether the client needs are the solution to the client problems. It can be argued that part of the remit will involve delivering the briefing project with time, cost and of quality which are the three golden standard of project requirements. However, as with all contractual arrangements there are penalties for failing to deliver on contractual arrangement and though this goes both ways the consultant project manager aims is to achieve the goals established to satisfy the client and avoid penalties.

Having highlighting those key issues, many organisation hire on a project by project basis, especially if project development is not a long term strategy, while other go for long term association and these are the client organisation with long term strategic vision. The significance of this is to have someone with the necessary experience and know- how to develop an understanding of the business, and project to drive the brief formulation to the point where it satisfies the client project requirement (Boyd 2006).

The literature on briefing has highlighted the often failures of current briefing practice to identifying client project requirement to their satisfaction (Kamara et al. 2001). Because of this opportunities are created for employing the consultant project manager, because of the need for projects to be delivered within the framework. Often when this is considered the policy defines speciality in consultancy, before employment, whether temporarily or on a project by project basis. It is argued this provide a better chance of success in realising project and other change development (Boyd 2006). In this way the role of the consultant project manager is seen as synonymous with that of a financial adviser in other firms, because he is seen as more of an integrator. Helping to focus the client issues in a direction of exert assistance and deciding on the needs of the client in situation of uncertainties (Myers 2004; Boyd et al. 2006).

Such uncertainties are evident when conducting the briefing process, especially in complex projects and this pervades throughout the process. According to El-Sabaa (2001) a complex project presents these situations and they occur with such frequencies

that they serve to test the capability of the consultant project manager, especially at the decision making process where the challenges can be greater and requires to conceptualisation of the strategic issues of the project to determine the requirements. These are the essential aspects of the consultant project manager's role (Kometa et al. 1994).

3.5.1 The consultant project manager wider roles

These activities are essential but in recent years the consultant project manager briefing role is also contextualised in light of the impact on the wider community because the decisions on the client requirement will invariably affect the community. For example a building will not only serve the client, but also the customers from outside the organisation. This has been acknowledged by the wider academic community. Major research developments in recent times also confirms that as a service provider the impact of their work is evident in the increased growth of companies and the economic benefit the industry derives. This has led to further increase in demand from client for the services of the consultant project manager (El Sada 2001; Kubr 1978).

Clarke (1990) contend that the increase demand by clients for management consultancy is as a result of the economic benefit but primarily linked to organisational knowledge deficiencies on the part of clients and a need to supplement-in-house skills.

In as much as the consultant project manager is coming from a consultancy the awareness of their role is seen as important to the industry. The literatures on consultants and project managers has taken to define the consultant (project manager) role as helping with problem solving, and provided the rationale for many of the published work in this particular field to associate increase demand with performance. The Project Management Journal in particular adopted project management as “a

method” for solving complex organizational problems. Such a viewpoint treats project management as one of several ways for handling organizational activity (Hartman, 2008). Other groups have emerged which focused primarily on the distribution of project management knowledge from project-oriented research. One such network is the International Research Network for Organizing by Projects, or IRNOP, founded in 1994.

One might argue that the field of project management, both from a practical and theoretical perspective has developed rapidly in recent years but the views of other authors is that the focus has been much too narrow(Soderland 2003). Having such a narrow perspective contributes to the true potential of project management not fully explored and put to the industry. The danger is, key issues on project management uniqueness in applicability throughout the industry can be omitted from the public domain and this will be limiting the true potential consultancy project management.

When the propensity of project management researchers were to focus on the reasons for success and failure of consultant projects managers only this was criticized. The view put forward was that there are a number of important questions that need to be addressed which might be at the core of discussions in order to develop our understanding of the consultant project manager performance in addition to project management success.

But the areas of much concern are normally uniqueness, task complexity and time-limitedness. Importantly the widespread use of the consultant project manager in organizations today is the driving force in the search for factors that influence project success. We should not lose our understanding of the impact of personality trait influences in all of this, especially at project initiation, and remember that first a project exists because there is something important and complex to be solved which need a structure to affect a change process.

Such issue are widely addressed in the work of the Project Management Institute

which was established in 1969 to promote standards for the industry, in addition to guiding industry professionals. Another body whose work contributed to advancing the same cause is the Association for Project Management (APM).

One of the key tasks of these bodies is management training, providing training in technical skills areas is deemed essential because to achieve project success as it relates to time, cost and quality, key aspect of improving standards and awareness of construction skills and awareness is essential to carry out the work. Project success are generally measure by what is deemed in construction “the golden rule”, time, cost and quality and though it may appear that emphasis is placed on providing technical skills, this is because of the role technical skills play in achieving key elements of the golden rule. It is the perception among some practitioners that technical skills are easier to deal with when compared to the more difficult areas of soft skills.

There is the recognition that different types of projects require different approaches to their management (Crawford et al. 2004). Professional associations are beginning to recognize this diversification of project management.

However, while recognizing the need for different management approaches, there is the recognition that different success criteria are influenced by different personality traits construct and background experience of the consultants.

The literature on relationship between project success criteria and project type, observed these differences, especially performance of projects against success criteria, and noted few differences when measured against these criteria. Muller and Turner (2007) have also shown that a consultant project managers’ success at managing his or her role aside from the project circumstances is also dependent on competence, leadership style, emotional intelligence, management focus and intellect, particularly influenced by personality traits.

3.5.2 The management role of the consultant project manager

In terms of the aspect of coordination the briefing process is also about managing activities and management responsibilities which are integral to the decision-making process. Kuhn (1982) suggests this aspect to be of crucial importance. However (Handy 1981) extends the consultant project manager role beyond decision-making and co-ordination to include handling uncertainties. He argues that to the extent that the situation in the briefing process involves categories of activities suggest the consultant project manager have a deeper and essential role (Handy 1981; Galbraith 1973). This involves overall management of the uncertainties in the process of defining the client requirements. Mastrandrea (1986) contends the work of the consultant project manager is better explained in terms of uncertainty, the main aspect to be considered. It is suggested uncertainty permeate every facet of the construction briefing process, and the fact that the process relies on information gathering which in itself is about an information process seeking to identify the client requirements; there is to some extent a degree of uncertainty (Heinstrom 2003). Even in complex projects the fundamental problem is coping with uncertainty and this is the essence of the consultant project manager work. Galbraith (1973) defines uncertainty as the difference between the amount of information required for making the decisions and the amount of information already in possession.

The way of handling uncertainty however is largely by mutual consent or by the creation of lateral relationships. Galbraith (1973) describes a continuum of increasingly sophisticated roles varying with the level of uncertainty encountered, starting with direct contact between two individuals who share a problem. Within this Galbraith (1973) contended that it is within this continuum that the work of the consultant project manager lies.

3.6 Measurement of the consultant project manager performance

At the same time the consultant project manager is managing the process the focus is on performance measures. The traditional performance measuring systems places emphasis on key performance indicators to measure performance and there are several framework which also provide different reasons why performances are measured. For example, business organisations measure performance to assist the organisation in making the right decision strategically or operationally. The Egan report alluded to the quality of performance in the construction sector to suggest improvements in key areas are require if the sector is to be competitive. This includes improvements in individual's performance measured against specific targets. Essentially individual performances therefore serve as a means of supporting these overall objectives and strategic position of an organisation and are linked to achieving specific goals of the organisation.

Specifically, in the briefing process, performance evaluation is important to determine if the achievements are in keeping with the key performance indicator, whether it aid client in their strategic decision, and importantly whether it satisfies the client requirements and expectations. In most instances the emphasis is on determining whether achieving the project requirements is done to the satisfaction of the client (Locke 1970). In this context satisfaction is regarded as a function between the consultant project manager's perception of briefing effectiveness and the client expectation of effectiveness.

There are many disciplines in the construction sector which have undertaken to measure performance, including individuals and organisations, and in all instances the models adopted tend to focus on key performance criteria, like successful outcomes, which involve the act of carrying out the tasks. In the context of briefing such task would involve decision-making and communication, measured from the standpoint of the approach employed for ensuring effective outcomes. Specifically at the action level the measure will focus on the performance of the consultant project manager carrying

out the key tasks briefing, whereas at the result level, the measure is effective job performance, ultimately client satisfaction. These measures also combine observations from different standpoint, which can be objective or subjective. In terms of the object measure this includes observation rating by peers, observers or self-evaluation, whereas subjective measures would look at the effectiveness of the briefing outcome (Judge, 2007).

In the past performance measurements referred to measuring a fundamental part of a process, or any activity thereof, which has a data requirement, usually measured in different ways (Mahlamaki 2010) for example, how effective coordinating, monitoring and diagnostic was done. In the case of the briefing process this would be how effective the briefing process was conducted. In this manner a typical measure would define what to measure, how to collect and process the data and then how to evaluate it to provide the facts needed for it to make changes or decide whether the outcome achieve the expected satisfaction.

However, in terms of what to measure, this process is never easy, because (in the context of briefing) at one level the consultant project manager may consider the briefing a success, while the client declares dissatisfaction with the outcome. The consultant project manager in pronouncing the success may use judgement based on some factual evidence, however the client may not uses the same data. This point is made to highlight that perception of success is sometimes based on feelings and personal indices and for these reason it must be clear how performance would be measured, because success can mean different things to different people and since the requirements of clients generally differ, the perception of what constitute effective performance must be measured against achieving key indicators. Under any circumstances these could be a major challenge (Mustapha et al. 1998).

Therefore, in the briefing process, two critical questions can be asked in measuring the CPM briefing performance, and these are: (1) what to measure? and (2)

How to measure (Bailey 1983), as such the research seeks highlights what aspects of the consultant project manager performance would be evaluated and the optimal ways to measure those aspects.

It is important to note that the consultant project manager performance will be deemed effective (ultimately effective briefing) if he performs the task of identifying the client project requirements so that the project performs to the satisfaction of the client. Because performance measure in construction also focuses on time, cost and quality which serve in most cases as the key performance indicators these three criteria should be carefully assessed and considered. When we refer to time the specificity can refer to the details of the measure and in terms of the time the process took, or the quality of the briefing in term of representing the project requirements.

In addition in many instances the approach to measuring job performance relies on some level of subjective judgement (Ashton and Lee, 2007). This in turn may induce biasness in the assessment. For example, while being observed the consultant project manager may want to create certain impressions. Therefore in order to assess the effectiveness of the consultant project manager brief and the client satisfaction, one can identify the three elements separately in the briefing process. For example this has to do with the briefing process identifying the client requirements, and finally how effective these procedures make the work, the team and finally how efficient these procedures make the work of the team and meeting the client expectation. These are also considered essential in evaluating the overall performance of the consultant project manager performance

3.6.1 Evaluating variations of consultant project managers' performance

Further from the perspective of project success, because debates usually solicits the classic response of, projects coming in on time, within budget and meeting client

requirements and expectation (Kubr 1996) it is arguable what usually propagates the early stage discussion. Quite interestingly the consideration of the influence of consultant project manager traits usually never appears to be part of the main discussion. This appears to be changing more particularly because the attributed which contribute to the success of consultant project managers are seen to be factored to be inclusive personality traits influence and this has been receiving recognition, because traits are shown to influence job performances (Anderson 2007). Though other factors such as competence, client commitment, and compatibility of thoughts and standardisation of the whole process are noted as essential for the consultant project manager to conceptualise the client issues of concern, including the standards (Clark 1990) they are considered within the context of personality influence to explain the varying degree of performance.

Reviews from practitioners and academicians that focussed on an understanding the success factors projects have over the years wraps these issues in a behavioural skills context to suggest that these have contributed to the variation in the consultant's performance. This is more about a distinct recognition of the personality of the consultant in the management of the process. The connotation is that the work of the consultant is better implemented when the consultant possess the traits that are connected with the issues and problems.

Research on two major aspects of consulting relationships indicate in the first instance that there are interlinked, also the relationship between consultant and clients are likewise interlinked, and if the consultant-client relationship is to be properly understood, then both parties have to encourage such understanding. The inference therefore is that it is important to come to grip with the fact that success in projects is viewed widely from a perspective of delivery on time, completion to budget, and satisfaction of client's overall expectations (Young et al. 1998).

Though these are measurable, project success can also be looked at from the

aspect of competence of consultants and client organisational characteristics. If we focus primarily on the external consultant and the organisational client system, we can assume that the main role of the consultants is to advise the client. Such activities are of increasing importance when it comes to the long term viability of the project and the client organisation.

But quite often some consultants performance are often criticised by some clients because they might not be receiving the service they need. This is seen so often in briefing process that has led to a failure in identifying the project requirements. Without a clear understanding of the client brief and requirements, the assignment is never going to be effective. But what is the role of the consultant and why are there variation in performances? The most simplistic response is to provide skills, services and knowledge that the client lacks but has a need for. Rather than recruiting personnel for long term contract which increases cost, many organisations prefer to use project management consultants to effect change in their business. Often this is in areas that they don't have a permanent need for, especially at the conceptual stage of the project, where the development of the brief is important to guide the construction phase of the project. In this way a new concept is embarking on efficiency or cost saving. In this way the project management consultant adds to the project knowledge and brings a different perspective and should focus the activities of those in the team. But this is not just about providing services. The management consultant needs to be a skilful negotiator, an informed arbitrator, a good presenter and more traits that will command respect and support amongst clients and co contributors on projects. These additional skills smooth the process of change, effect more compelling action plans and also achieve more for the client.

Some of the reasons many consultants do not match up to high standards, have been attributed to a lack of the specific personality trait normally associated with success in that specific job. As such the consultants and the firms they represent might argue out of self-interest that there is no problem with their professional credentials, but

there is the evidence from years of research (Greiner et al. 2010) in construction to force a disagreement. Being aware of those traits is part of the human characteristics and impacts on project success and achieving client satisfaction.

3.6.2 Criticisms of the performance of consultancy and the CPM.

The consultant project manager involvement in the briefing process, though it adds significant value to the client organization (Fincham 1999) has consistently attract a significant amount of criticism, both from clients, as well as management scholars (Sturdy 1997). They are often criticized because of their over-reliance on propagating management fads and a failure to deliver on plans, albeit failing to deliver the client requirements, even failing to provide plans that are executable by the client. These failings have urged many researchers to suggest management consulting advice is at times faulty and affects the ability of the organizations to actually create the change suggested. This usually results in substantial damage to the organizations. According to Argyris (2009) a lot of the advice given today does not have real merit and from a closer examination of the details, some of the work of consultant project manager, particularly the advice given today contains gaps and inconsistencies that may prevent positive outcomes.

Thus the ineffective consultants are often accused of delivering empty promises, despite significant cost incurred to be employed (Sturdy 1997). They are also often seen as failing to recognize the problematic issues because of a lack of experience in the areas to base their advice. These consultants bring few innovations, instead offering generic strategies and advise which are irrelevant to the client's particular problem.

Another concern is the promise of consulting firms to deliver sustainable results. At the end of an engagement between the client and consultants, there is often an expectation that the consultants will audit the project results for a period of time to

ensure that their efforts are sustainable. Often it is difficult to implement the advice because of the disconnect between the client and consultant and performance is inconsistent (Hari 2008). Of consideration for this research is to determine what are the personality factors which are contributing to such varying performance levels from the consultant.

3.6.3 The relationship between the consultant performance and personality

In light of the personality and performance literature, effective performance in the briefing process and ultimately effective outcomes are related, but there are also the results of other influence. In other words there are more factors that determine outcomes that just behaviours and action (Lorenz et al. 2005) which can be attributed to personality. According to Hogan (1991) this appears to suggest a linked to one's inner personality which generally informs thinking pattern.

Quite often, the tendency among clients and other key stakeholders who are cognisant of the vast amount of information needed in the process of generating the brief is to look to engage the consultant with the perceived skills to interpret the core business issues to give assurances of success (Mastrendrea et al. 1988). In a major way this is an implicit recognition of the importance of specific personalities to influence the work of the consultant, otherwise why is it that in their search for a consultant, the approach in selecting (among hundreds) is to look at background experiences, recommendations (OGS 2008).

The consideration therefore for the client is who to engage for the next project. This is very often overlooked because clients to some extent perceived success is derived from merely engaging a consultant. The fact that the consultant has to quickly come to grips with understanding the client business and project requirement calls for someone with specific traits and background knowledge (Hartman 2008). The critical issues for the

client therefore should be how to coalesce coherence between client and consultant to ensure the client can forge ahead with the work. It is a skill necessary to ensure the consultant work together as the process moves ahead.

Fincham et al. (2002) contends that past success of consultant in the industry has set the standard for future engagement. Though project complexities varies client use these previous standards for assurances on project success. These are preconceived notions because the variability of project would suggest a more careful analysis of the consultant role is necessary. Nevertheless the expressed view among client organisation is that the ideas on how to improve core business performance to achieve project requirements and other competitive advantages are better analysed, developed, and implemented under the guidance of many consultants (Fincham et al. 2002). The consultants approach can be thought of as lying somewhere along a continuum, with an 'expert' or prescriptive approach at one end, and a facilitative approach at the other.

According to Clark (1990) there are few client organisations, whether in construction or any other sector that would have avoided the effects of some kind of consultancy-led initiative, and this trend has increased dramatically over the past decade (Greiner et al. 2010). In many ways in the client organisations consultants have become part of everyday organisational life. This is simply put to the specialist knowledge and skills they bring to the client base when the client needs them. Quite often the need arises when there are complicated issues to address, and where a great amount of complex information is be gathered as in the case of the construction briefing process. The need for engaging the consultant also arises when there is a temporary or short-term need to understand the nature of a particular problem. The specialised skills and knowledge they bring adds value to the organisation work, especially as it relates to delivering projects to satisfaction.

In other cases the client organizations hire the services of the consultants (project manager) to gain external (and presumably objective) advice, access to the consultants'

specialized expertise, to help to improve the organization performance. This is primarily through the analysis of existing business problems and development of plans for improvement or simply as extra temporary help during a one-time project, where the hiring of more permanent employees is not required.

Because of their exposure to and relationships with numerous organizations, consulting firms are also said to have an awareness of the industry “best practices”, although the transferability of such practices from one organization to another not as simple as moving around consultants (Fincham et al. 2002).

3.7 Conclusion

This chapter sets out to investigate the involvement of the consultant project manager in the construction briefing process, to gain insights on roles in the delivery of an effective briefing process. To achieve these objectives the chapter specifically reviews the literature on the consultant project manager involvement in the briefing process, selecting the consultant project manager for briefing, the consultant project manager filling a gap in the process, organisational policy about consultant project manager and measurement of the consultant project manager performance. The review found that the consultant project manager involvement in the briefing process is particularly influenced by the nature of his (her) roles which involves providing assistance for solving a client problem. In the context of the briefing process the consultant project manager primarily manages the process to (firstly) determine whether the client requirements are necessarily the solution to the client problems. Providing such interface between the client and the consultant project manager is essential and this is characterised by the way the process is co-ordinated, and crucially the way the decision-making is conducted.

The consultant project manager coming from consultancies indicates both the

industry and practice of helping organisations to improve their performance by way of analysing issues through the existing problems and development of plans for improvements. The strategic approach to engaging a specialist service provider from an independent perspective focuses on the practice of the consultant project manager and this is regarded as essential for the decision which impact on every phase of the construction process and ultimately the outcome of the process. The consultant project manager involvement is also seen within the context of the construction briefing process a best practice option for better briefing and therefore crucially the nature of the project in terms of type and size ultimately impacts on the decisions made to construct a specific approach to briefing. It is the trend of client organisation to engage the consultant project manager on this basis and this process takes many forms leading to contractual arrangements. The understanding that the consultant project manager practices are mostly within a framework of activities to which in many respects does not follow is the established frameworks in, guides gives the impression of success.

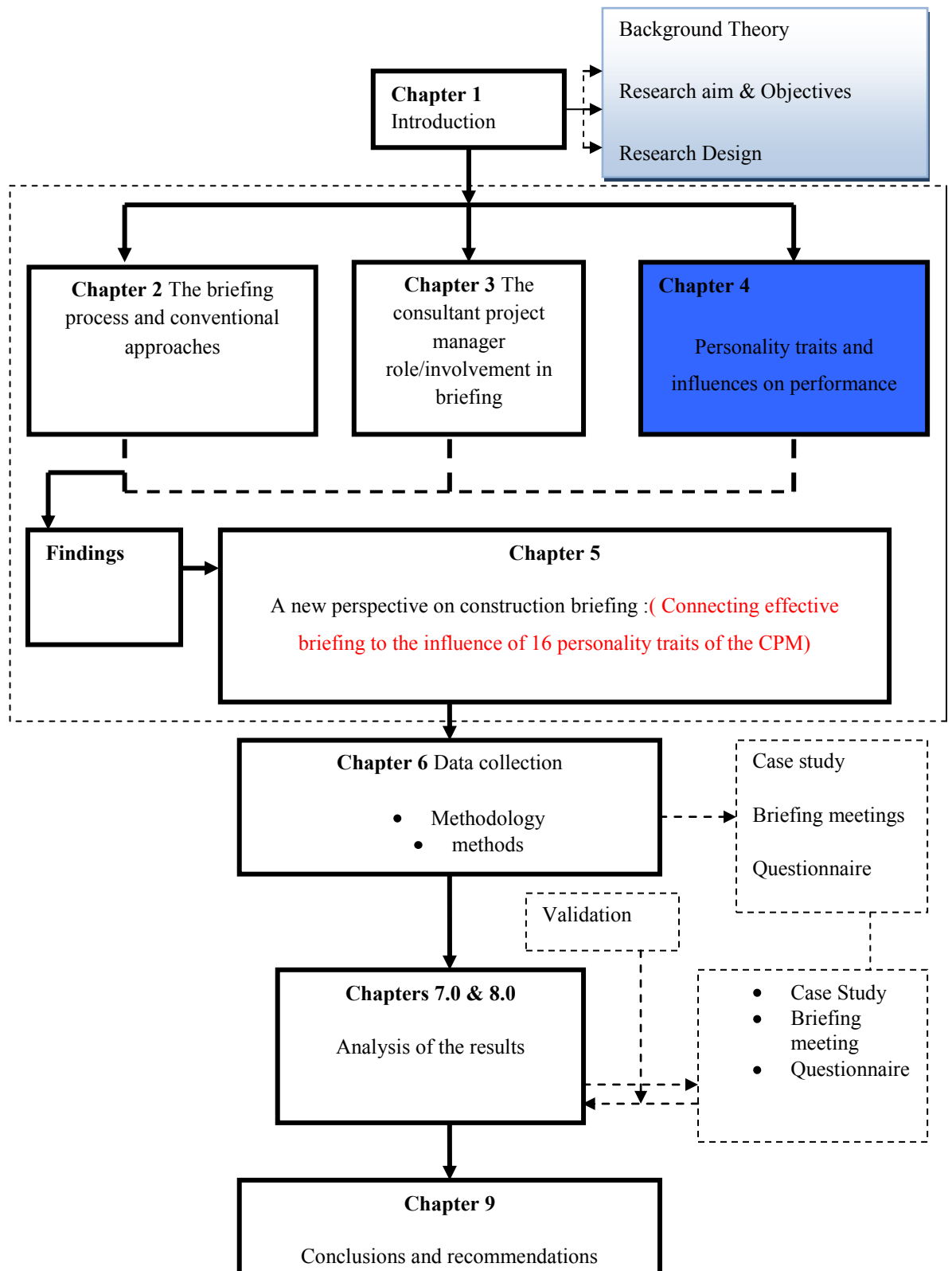
This perception that the consultant project manager role which involves problem solving would suggests since in briefing there are matters of solving problems, then within this continuum the consultant project manager role fits with identifying client requirements. These are the basis on which the clients seeks the involvement of the consultant project manager to evaluate the project issues and advise on pursuing a path which offers the best solution of the briefing problems.

However performance in the construction briefing process varies owing to the nature, type and size of project. The level of information for evaluation can be complex and given the enormous effort needed for developing the briefs, especially in complex projects (Boyd 2000) this can complicate the issues. Similarly it is found that variation among consultant project managers is mainly due to individual differences owing to personality traits associated with the construction project manager. The presence of the consultant to enhance the prospect of developing an effective brief through careful assessment allows for taking ownership and exerting influence on the direction of the

process (O'Reilly 1987). Considering that the expectation is for the consultant project manager to advise the client and solve problems, this relies on the soundness of the decision made. Equally, soundness relies on the personality trait attributes of the consultant project manager.

In conclusion, contents of this chapter confirm that the consultant project manager involvement is essential a best practice option to improve the process, but performance generally varies and often the advice is not effective in addressing the client problems. The review found that these appear to be as a result of individual differences influenced by personality trait differences. An increasing understanding of the traits which are related to and influence the consultant project manager performance may make clearer our understanding of trait influences on the consultant project manager performance.

Chapter 4 Personality Traits and Influence on Performance



4.1 Introduction

The purpose of this chapter is to investigate personality traits and their influence on work performance, specifically as they relate to the performance of the consultant project manager in construction briefing. Since the focus is on personality traits of the consultant project manager which influence performance in briefing, the essential issues relating to the relationships between traits and performance are evaluated in order to establish a link to effective briefing. This will be achieved by means of a review and critique of the current literature. Particular attention is given to the consultant project manager personality traits and ultimately their influence on performance. Both aspects are argued to be highly relevant for improving the effectiveness of the briefing process. Based upon a common perception that personality traits influence individual's performance in job situations, the various issues relating to personality traits and the influence on performance will be reviewed under the following key themes, personality traits, personality traits assessment in construction briefing, measurement and identification of personality traits of the consultant project manager, the benefits of using personality assessment. It will be found that personality traits are relevant to predicting performance in specific job settings. Finally, taken as a whole, an overall picture of personality traits measures and benefits in the context of the consultant project manager in the briefing process will be presented.

4.2 Personality traits

Personality psychology has a long tradition of development, coinciding with the work of Freud, Allport and Goldberg in the 19th century on personality traits. The theory suggests personality traits are unique characteristics that influence our thoughts, feelings and behaviours that distinguish the way we behave when compared with one another (Atalah 2009). In other words based on our behaviours our traits construct can be defined (Matthew et al. 2003). Each individual has unique personalities that

differentiate us from each other, and so when people think of personality traits, the obvious question asked is: how is personality traits assessed and what is the impact on performance? Assessing personality is done for several reasons, one, it provides a measure of how individual's approach their work and communicate with people. Fundamentally the key is improving performance and therefore a direct connection has to be made between personality and performance to assess the areas for improved performance.

There are several approaches to measuring performance, which includes self-rating and measurements (DeSota and Solano 1997). The method of self-rating involves having respondents scoring traits on a Likert scale (with values ranging from zero to an acceptable point, for example 10, depending on degrees of significance) to indicate importance. This approach provides a basis for evaluating influence. Matthew et al. (2003) from another perspective suggest a simple way to measure traits is to ask someone to identify, from a defined list of traits, the trait (s) which best define his (her) actions, or simply by observing the individual performing in a job situation.

Importantly Allport (1937) noted there are three parts to the traits theory argument, for example:

- Traits are real; they exist inside us
- Our personality can be described in terms of traits
- Our actions can be explained in terms of traits.

This conception suggests temperaments are almost surely controlled and can be measured using observer rating (Allport 1937), accordingly, Costa and McCrae (1992) contended understanding individual's personality helps us to know how the individual is likely to react and feel in certain situations when faced with a particular challenge.

Recent studies examining the relationships between personality traits and performance found a direct correlation between the two variables. These correlations

have been found to be consistent in predicting occupational performance (Barrick, Mount and Strauss 2001). Because they are distinguishing characteristics of an individual, it implies that traits instil a readiness to think or act in a specific way in response to a variety of different situations (Atalah 2009). These findings which are specific to our thoughts, feelings, desire, intentions and actions suggest an important aspect of individuality. Importantly they underpin our desire to react to specific job situations.

Anderson (1987) referred to specific actions to make explicit the impact of personality influence. Atalah(2009) seeks to distinguish these influences by referring to the uniqueness of organisation of thoughts, feelings, and behaviours, which qualities are combined distinctly in each person to defines and determine the person's pattern of interaction within the environment.

In these environments there are measures to control performance. These measures seek to highlight our responses in job situation, and in a simple analogy by Anderson (1987) the importance is explained by assessing an acquaintance actions and confidence in a crowded situation. He suggests that in assessing these attributes, physical attributes should be disregarded because a simple response to a question, properly designed, provides insights into a key characteristic called their personality.

Blickle (1996) extended this concept further, to define actions, efforts and personality, and suggests that there are many job situations when effort alone may result in effective and satisfactory performance, similarly there are many situations where efforts alone may not be sufficient. An individual may be doing a job for many hours, making decisions in different circumstances, but he or she may be applying ineffective strategies and may not be doing well as someone who is making the right decision and using the right strategies. He contended that these characteristics can be explained by the sum of personality, which explains our actions from a personality inducement perspective to make explicit the link between performance and personality. It tells,

using effective strategies alone may not be sufficient either, because making the right decision and employing the correct strategies in a job situation has to be coordinated, and these situations are significantly influenced by personality traits (Blickle 1996).

These propositions are continually being expanded, and investigations have moved to understanding personality as a major predictor of individual performance. Equally an understanding of how these variables can be correlated (personality and performance) to explain variance in performance is pursued (Pallegama et al. 2007; Barrick et al. (2003).

The work of Goldberg (1999) suffices. Particularly because personality comprises psychological issues which underpins temperament and predispositions and in part, motivate and govern behaviours (Anderson 2007; Heinstrom 2002). It summarises that individual's action, in part, is determined by their personality. Though there may be other factors, it appears personality is the significant and major force behind individual differences in behaviours, and explains why individuals act differently. Interestingly the personality construct of traits are frequently being banded to suggest traits are identifiable and measurable in job situations (Boeree 2006; Carr 2000).

On a slightly broader perspective, and to provide further insights into traits and actions, Mumford and Gustafson (1988) articulate three points, each focussing on relationship between personality traits and performance. Firstly they contended that personality traits can facilitate or inhibit the effective use of strategies, however if effectively defined, this can improve or deteriorate performance. Secondly personality can provide the motivational impulse to improve performance, and thirdly, depending on personality traits construct, an individual may succeed or fail. These connotations which are underpinned by decision making in particular, are key to understanding aspect of performance differences, which can be explained in terms of how personality traits induce actions. When Baker (2008) suggest that individuals are different in their

approach to job, he apparently recognised personality traits constructs are important factors to propel good understanding, actions and performance.

Essentially the current literature on personality traits tends to formalise the discussion on personality and performance in the context of the five factor dimension to explain link (between performance and personality traits) (Bedingfield et al. 2008). This is curtailed within this context to give a broad descriptive framework for defining individual differences within the five global traits of, Neuroticism, Extraversion, Openness to experience, Agreeableness and Conscientiousness. Similarly, in each dimension there are a number of facets to distinguish (identifiable) traits of individuals, especially for specific job situations. Defined differently, the main dimensions are also conceptualised as the NEO PI-R, which is a measure of the five major models (FFM) (Costa and McCrae 2007) and provides a valid measure of personality traits.

Interestingly Goldberg (1999) contends that the dimensions of traits have extended beyond the five main dimensions (or sometimes called the gold standard) and argued for further investigation to make explicit other traits which can define performance. The lexical language which is comprised of over 15000 words provides the medium for doing so, as they relates to other traits (descriptively) of individuals.

4.2.1 Personality and relationships to individual actions

From the above discussions there is an appreciation that individuals are different, have special qualities. These differences may be easily observed, and explains why people actions are usually construed as personality-based. The current literature indicates these differences, especially as it relates to performance in specific job situation and concurred most studies refers to the big five dimensions. Two meta-analyses (Barrick & Mount 1991; Hough et al. 1990) that have examined criterion-related validity studies with personality taxonomies supports the big five dimension and

though they have adopted slightly different perspective, found that individual actions can be summarised in accord with the Big Five taxonomy. Similarly Barrick and Mount (1991) establish performance relationships to the big five dimensions.

4.2.2 The big-five personality traits and job performance

The five factor model (FFM) or dimension is therefore the benchmark for most research on personality and performance measures (Barrick et al. 1991). Its foundation was built from years of discussions and agreements on individual's actions (Revelle and Loftus 1992) and the ways they reacts and interact with others (Bedingfield and Thal Jr 2008).

It is one of the most highly regarded theories that became prominent for describing individual's actions (Revelle 1995; Barrick et al. 1991). It is not based on one specific personality theory only, but represents the work of many researchers using a lexical hypothesis, which suggests that natural language contains all the important attributes of humans. The concept is not meant to imply greatness or supremacy, but to represent these five factors as the highest level of abstraction representing various sub-factors which are correlated in repeated studies.

The validation suggests reliability across different cultures, languages, instruments, and reports made by self-report, third party and professional reporting. Barrick and Mount (1991) provides sufficient explanation to suggest individuals personality traits are subsumed by five global traits.

Measures of the traits, interesting, at the leading end of the five dimensions is the NEO-PI-R which is an indicative measure of the five dimensions, to suggest the longer the NEO PI-R, the more comprehensive is the measure, not only for the main dimensions, but also their facets (table 4.1 & 4.2). This enables building a more comprehensive and detailed assessment of normal personality (Costa and McCrae 1992). Essentially the

NEO- FFM instruments provide a useful measure to define each domain (Bedingfield et al. 2008).

It may hold true therefore that the construction professional's personality traits can be similarly defined by the lexical description, which makes it simpler to understand the consultant project manager personality traits can be so defined by traits other than the main dimensions (Goldberg 1990).

Table 4.1 Big-Five dimension and illustrative adjectives

Dimension	Prototypical Characteristics	Illustrative Adjectives
Conscientiousness	Responsible, dependable, Able to plan, organized, Persistent, need for achievement, Persistence, scrupulousness	Organised, systematic ,thorough, hardworking, planful, neat, dependable, (careless), (inefficient), (sloppy), (impulsive), (irresponsible)
Extraversion, Surgency, Sociability	Sociable, talkative, assertive, ambitious, active, dominance, tendency to experience positive emotions	Extrovert, Talkative, assertive, gregarious, energetic, self-dramatizing, (reserved), (introverted), (quiet), (shy), (unassertive), (withdrawn)
Agreeableness	Good-natured, cooperative, trusting, sympathy, altruism,(hostility), (unsociability)	Sympathetic, cooperative, warm, tactful, considerate, trustful, (cold), (rude), (unkind), (independent)
Emotional Stability, Adjustment, (Neuroticism)	Calm, secure, not nervous;(predispositions to experience anxiety, anger, depression, emotional instability)	Un-envious, relaxed, calm, stable, confident, effective, (moody), (touchy), (nervous), (moody), (self-doubting)
Openness to Experience Intelligence Culture	Imaginative, artistically sensitive, aesthetically sensitive, intellectual, depth of feeling, curiosity, need for variety	Intellectual, creative, artistic, imaginative, curious, original, (unimaginative), (conventional), (simple), (dull), (literal-minded)

Note: Prototypical characteristics and adjectives taken from McCrae and Costa (1989), Mount et al. (1994), and Hogan (1991); items in parentheses define the opposite pole of each dimension.

Table 4.2 – Big-five dimensions and facets (sub-factors)

BIG-FIVE DIMENSIONS	FACETS
NEUROTICISM	<ul style="list-style-type: none"> • Anxiety • Hostility • Depression • Self-Conscientiousness • Impulsiveness • Vulnerability
EXTRAVERSION	<ul style="list-style-type: none"> • Warmth • Gregariousness • Assertiveness • Activity • Excitement Seeking • Positive Emotion
OPENNESS	<ul style="list-style-type: none"> • Fantasy • Aesthetics • Feeling • Actions • Ideas • Values
AGREEABLENESS	<ul style="list-style-type: none"> • Trust • Straightforwardness • Altruism • Compliance • Modesty • Tender mindedness
CONSCIENTIOUSNESS	<ul style="list-style-type: none"> • Competence • Order • Dutifulness • Achievement Striving • Self-Discipline • Deliberation

Source: Bedingfield et al (2008)

In discussing the big five dimension and linking to performance, Salgado (2002) noted the dimensions of emotional stability, conscientiousness, extroversion, and agreeableness, except openness, were valid predictors of job performance in management. Further, Brooks (1995) contended that agreeableness, conscientiousness, and openness are related to job performance of managers across retail organizations, and though it is found that the effects of openness are no longer obvious after controlling in organization. Stevens and Campion (1999) contended that conscientiousness and extroversion are positively correlated with preferences for managerial work and job performance and this is consistent with other studies (Salgado 1997). According to Myers-Briggs (1980) Openness and agreeableness were associated with greater preferences for an inclusive management styles. Managerial roles generally support the idea that leader's attributes (Zaccaro et al. 2001) is to the extent that leaders trait present a number of concerns, the mitigating circumstance are the extent of their contributions (Bass and Stogdill 1981). The inference is suggesting understanding leader traits and attributes require a deeper conceptualization of how these traits influence different leadership outcomes (Zaccaro et al. 2001).

Kenrick and Funder (1988) supporting the utility of the leadership trait concepts, noted the situation in which the leader operates impacts on performance, as well as the person in the situation. These conditions must be explicitly addressed before we can predict the effects of traits on the leader performance, because a leader can be creative in their thinking in organisational problem solving, and since creative or divergent thinking are influenced by specific personality traits (Zaccaro et al. 2001; Mumford & Gustavan 1988) then critical leader attributes may informs of the ability to respond effectively and appropriately across situations.

4.2.3 Understanding personality to contextualise performance

Taken alone the big-five concept and the 30 occupational traits are significant

for understanding key differences in performances. The different features in every job requires different personality, and levels of behaviours, for successful performance (Anderson 1987). This understanding is consistent across occupations and suggest that the personality of an individual, in part, determines if he(she) has that natural inclination for that specific jobs, and importantly whether the individual will likely succeed in the job (Anderson, 1987).

The current discussion on personality and performance suggests individual's behaviour naturally varies somewhat from occasion to occasion, because there is a core of consistency of traits which underpins the true nature of performance indicates how the individual is likely to excel in a job (Matthews et al. 2003).

Therefore, if we consider that the consultant project manager is also unique in characterization, owing to individual differences, then it is logical to understand the impact of personality traits on performance (Boeree 2006; Barrick and Mount 1991) and why performance will vary in keeping with the job situation and core personality traits the consultant project manager possess (Johnson and Singh 1998). As well as the enduring qualities of the individual, certain traits in the core element will show particular behavioural predispositions in similar ways across a variety of situations (Zaccaro et al. (2001).

4.2.4 The influence of personality traits on specific job circumstances

The above conclusions underpin our actions individually (Boeree 2006). In two simple analogies Anderson (1987) brings this out forcefully to support the linking of performance to personality in specific job situations. In the first example he considered the role of a typical accountant and secondly a sales person role is considered, to highlight the factors which influence the way he goes about his tasks. In most cases people would think of an accountant as conventional and the sales man as generally

outgoing and ambitious (Anderson 1987). Reference is made to these distinctions because both occupations seem to be filled, in general, with people possessing decidedly different personality characteristics.

By evaluating these roles, especially linking the personality requirements of the accountant and sales person Anderson (1987) differences are clearly measurable and can be rated. The significant differences exist between the accountant and sales professionals on several personality counts. For example, in the case of the sales professional personality dimension and performance, these are more associated with assertive (Dominance scale), enterprising (Capacity for Status scale), outgoing (Sociability scale), spontaneous (Social Presence scale), optimistic (Self-acceptance scale), cheerful (Well-being scale), entrepreneurial (Achievement via Independence scale), and comfortable with managerial authority (Managerial Potential scale).

On the other hand the personality traits associated with the accountants are more in conformity to societal norms (Social Conformity scale), exhibit emotional stability (Self-control), and value privacy (Orientation toward Others). These comparisons highlight stark differences in personality among the two professionals. Anderson (1987) contended that these were down to a relatively simple explanation which is linked to the duties and responsibilities of each occupation (i.e., accountant vs. salesperson). Each requires individual in their specific job situation to behave in specific ways for successful performance. Personality therefore helps determine these preferences, temperaments, and behaviour which are suited for job performance and also helps determining whether an individual has a natural inclination for specific job duties. Certainly, other personal characteristics (e.g., cognitive ability, education, experience) may play a part, but personality plays an important role.

These specific cases exemplified by Anderson (1987) highlight the association of personality to performance in job. They provided a basis for relating to the argument that a professional who is more apt to planning duties may be uncomfortable performing

duties typically associated with a position which requires frequent interaction, presenting in front of large groups, discussing and convincing clients, or even networking. Similarly it may hold true for a construction professional whose roles may necessitate an outgoing and ambitious characteristics and therefore may be uncomfortable with the tasks and discipline required for planning.

Workers appear to be most effective when their personality characteristics match the job requirements. Similarly individuals enjoy work environments that allow them to be themselves. The individuals who are quiet and reserved may be able to work in the planning environment but they would probably not find the work intrinsically rewarding and enjoyable. However over time, these individuals are more likely to leave in favour of a position more suited to their preferences.

Personality assessment can help ensure success by identifying the right individual for each work environment. Whenever a job's function requires the employee to work within a team setting, there is not only a cognitive element to the work, but an interpersonal aspect and so the task requirement is recognized as an important factor in performance, especially in a setting with a need for active team performance. This tasks completion therefore may be strongly linked to individual personality and requirement.

The interrelationship of the tasks in the briefing process which involves gathering information, analysing and planning has its own features and therefore the same arguments, as above, sufficed for the briefing process where tasks are multi-dimensional (Dolfi and Andrews 2007).

Therefore the construction clients, who are demanding greater project responsibility, would inevitably wish to have the individual with the right personality involved. While in the past the factors of education, experience and cognitive ability have served us well over time, new approach which involves personality traits consideration are now required. This became obvious in the 1920's, when the validity of personnel selection based upon aptitude, intellectual ability, perceptual accuracy,

was found to yield encouraging information, thus enabling effective assignment of persons to specific jobs (Shelton 2004).

4.2.5 Personality traits measure to evaluate performance

The understanding that our actions are defined by personality makes associating effectiveness of performance to the inducements of personality trait factors sound (Judge 2007). In particular the nature of the big five dimension and their facets, suggest if someone possesses a specific traits, then a specific outcome is expected and so consideration can be given to the effects of the facets(or sub-scales) of the main dimension. It is therefore likely that each of these decisions will be highly influenced by the client goals and the specific job-related variables that apply to that particular job setting.

Schmitt et al. (1984) suggest that personnel selection should be based on the highest predictive validity, but warned that this should only be the guide, because even this approach can result in failure to identify the individual specific to the job which can have a negative impact on performance. Never-the-less the premise of personnel selection for roles in the in construction organizations based on personality traits stands on stronger grounds (Carr 2000).

When addressing personality issues the concept of the bandwidth-fidelity is introduced to determine whether personality should be defined by the broad traits or narrow traits, or whether both broad and narrow traits are sufficient for personnel selection for specific jobs (Carr 2000). Ones and Viswesvaran(1996) appear to support the use of the broad traits (or the five main dimensions) instead of traits identified in the substructures, on the grounds that the broad measures are more reliable and the scales measuring the big-five dimensions have higher reliability than the narrower subscales. However Ashton (1998) found that despite this suitability it does not follow that the

broad scale must be a more effective predictor of a given criterion (than are the entire constituent subscales). The question he asked is whether or not the improved reliability derived by aggregating the subscales provides a gain in validity that outweighs the loss in validity due to the dilution of variance specific to certain subscales which relates to the criterion of interest. When the subscales of a broad composite are correlated, the validity of the composite is unlikely to be less than the validity of any of its constituent subscales (Ashton, 1998). This is especially relevant for evaluating the consultant project manager personality traits which Atalah (2009) show comprised a number of traits from the subscales.

4.3 Personality traits assessment in construction briefing

There are instances where the five factor model (the golden standards) has been consistently showing low validities from correlating some of the dimension with performance, forcing advocates of the model (FFM) to hypothesise that low validities in some of the dimensions may be due, in part, to the overlooking of situational considerations in performance assessments (Tett et al. 1991). These outcomes in addition have oriented researchers towards a more thorough understanding of the nature and influence of the relationship between personality and different aspects of performance (Schmid et al. 2008).

For example Carr (2000) and Hamilton (1987) in particular referred to various personality measures to validate predictors of performance in construction. Hamilton (1987) adopted stance specifically focussed on the empirically validity data to assess the effectiveness of individual performance by rating their traits, employing three personality inventory/instruments (Myers and Briggs, 16PF and FIRO) which met the criteria for effectiveness. He concluded that his approach is seen as the superior (functional) approach involving peer rating techniques applying the t-Test to compare mean scores on personality factors. Hamilton's findings equate with those of Carr(2000)

in respect of providing a basis for predicting performance and trait relationship to specific performance levels.

The question of whether these personality measures are valid predictors of performance in the briefing process was not defined neither was it part of the remit of the study. It appears never the less, based on the conclusion of Hogan, and Roberts (1996) that in the context of the briefing process, it may well be that well-constructed measures of normal personality could be valid predictors of the consultant project manager performance in the briefing process.

Further validations has been attracting much interest in other part of the construction sector, in particular to assess how personality trait construct can influence performance (Carr, 2000), to the point where the impact is evaluated for consistency in specific processes (Markus, 1983; Costa, 1996). Specific cases for example are, those of Johnson et al. (1998) and Carr (PhD Thesis 2000) who researched the personalities of civil and design engineers for predicting their job performances, and found a relationship exist between their personality and their performance. Awodele et al. (2007) introduced cognitive ability as an additional factor and similarly found a relationship with performance. He look at traits influencing performance, with a specific angle to computer research, this did not alter the conclusion since the variables were personality and performance. It is now the case of extending personality traits and performance assessment to selecting personnel for the military (Shelton 2004; Carr 2000).

In the literature these researches advanced the concept of trait and performance quite explicitly, by linking trait and performance, though they did not delve in to linking explicitly traits and performance in the briefing process scenario. This is not to say in any way that a link does not exist, but the role of personality traits in influencing the effectiveness of the briefing process is only mentioned to indicate the link to the human factor concept (Barrett and Stanley 1999).

Interestingly, the whole debate so far on personality has been conceptualized from a variety of theoretical perspectives, and at various levels of abstraction or breadth (John 1990). Each of these levels has made unique contributions to our understanding of individual differences in behaviour and experience. But we need to pause for moment and evaluate what is it we are invoking when we discuss the big-five concept in the context of construction? Understanding this has important implications for building theory interpreting research and the potential for improving the briefing process? (Zillig 1999). The fact that personality traits are conceived as pervasive styles of thinking, feeling, and behaving which impacts on such issues as vocational interest, choices, work styles (Hoekstra 1993), makes the case for understanding the issues which can contribute to job satisfaction, and the effectiveness of job performance stronger.

It is therefore logical to conclude that the complex nature of the briefing process can fall under this remit. The need therefore is for an approach which does not focus on the big five personality dimension (Goldberg 1999), giving way to alternative approaches, which considers trait impact in the briefing process and brief delivery. Though the traditional approaches were consolidating groups of people with specific responsibilities and functions in the briefing process, the resulting forms still did not portray any new considerations in the delivery of construction brief (Green 1999).

The consideration therefore is that the new approach will be supported by individual with specific attribute to manage the process (Zacarro et al. 2001).

In the context of a building-construction- project- cycle, the first set of activities is the selection of key participants for the composing briefing team. This usually takes place at the conceptualisation stage, just before a project begins and where there are greater possibilities for the team to improve their chances of achieving the project objective. Failing to coordinate this critical phase, and ignoring these guiding principles, which play a role in optimizing performance, is dangerous and inviting potential trouble and ultimately, project failure (Carr 2000).

Fraser (2000) suggest that personality factors are acknowledged to hold potential influence in achieving optimal performance in organisations, which also require appropriate talent, efficient procedures, clear roles and responsibilities. Teams must be able to operate in an atmosphere conducive to constructive interpersonal relations, managerial reinforcement and strong diplomatic ties with other parts of the organization. It is the latter group of criteria that relies considerably upon the presence and interaction of certain personality attributes to yield effective and positive team performance that will translate to effective management of the briefing process.

4.3.1 The effects of Personality traits on the CPM performance in the briefing process

Effective management is about individuals goals which are impacted by preference and job satisfaction. The theory of the person-organization (P-O) suggest individuals are likely to gravitate toward a job that satisfies their needs, desires, or preferences, especially when there is a good match between the requirements of the job and the personality of the person working in that job (Cable and Judge 2003). This suggests individuals tend to make job choice decisions based on personality fit and prefer organizational situation that requires the same “personality” as they have (Cable and Judge 2003). Based on these conclusions it can be argued that the consultant project managers is likely to perform better if matched to a job situation (projects) that fit his (her) personality. On this basis success is related to personality and therefore when an individual is matched to the job he (she) prefers the likely outcomes are success ((Judge et al. 1999). However the variability of the job situation is also of essence, for example it was found that a project can have as many as 13 important variables to illustrate the complexities of project in the industry. These are defined as: decision-making, communication, culture and ethics, types of business and organisational theory, critical success factors and key performance indicators, post occupancy evaluation and post project evaluation, risk and conflict management, knowledge management, change

management, client representation, teams and team dynamics, stakeholder management and project (Yu et al, 2008). Based on the premise of personality occupation fit theory(referred to above) then the consultant project manager who possesses the traits to address these circumstances can be successful, because he is matched with the circumstance which he(she) has the traits. In other words the consultant project manager would possess traits such as, analytical, intellectual curiosity, responsiveness, creative thinking and confidence and self-esteem to navigate the process (Atalah 2009).

It therefore holds that if we accept the conclusions of the personality fit theory to be true, and extends this concept to the briefing process, then the consultant project manager with the personality traits essential for extracting and delivering an effective briefing process will be successful in navigating through the briefing issues successfully to the satisfaction of the client. The question therefore is which are these traits?

4.3.2 The personality traits of the construction management professionals- the development and selection process

One of the essential research tasks is identifying the consultant project manager personality traits in the briefing process in order to evaluate and determine the influence on performance. As there is no know literature which evaluated the influence of the consultant project manager personality traits on performance in the briefing process, this sub-section describes a logical approach for developing a list to be used as the benchmark for determining those traits associated with the consultant project manager, and which for statistical purpose, is essential for evaluating the influence on performance (consultant project manager) in the briefing process.

Stewart et al. (2008) contends the influence of traits on performance can be seen in the benefits derived from an improved process, for example, a greater involvement and better teamwork is encouraged thereby increasing the possibility of successful

project outcome. To this end performance of individuals can be easily recognised and linked to tasks performance in job situations.

When evaluating personality and performance many researchers tend to evaluate many traits collectively to determine which traits correlate with specific performance characteristics and to gain understanding of the traits which underpin certain performance outcomes. This approach is based on this conceptualisation. It will evaluate traits collectively to identify the personality traits which underpin behaviour and performance in the briefing process. The benefits are derived from being able to identify the personality traits to evaluate influence on the consultant project manager performance (Jacques et al. 2008; Muller et al. 2007).

The big five dimensions (table 4.2) follow a relatively mature and stable concept and most researchers tend to apply it to associate performance (McCrae and Costa 1992). This is suggesting personality traits can be generally categorised under five broad dimensions and each of these dimensions have their facets, distinguishing independent factors (Yan et al. 2009).

However, although it is generally agreed that it is a helpful basis for furthering systematic study of individual differences, this consensus only lasted until the 2000s (Ashton 1998). Researchers are moving on to identifying other traits to link to performance on the basis that not all traits are captured by the five factor model and their facets (Paunonen & Ashton 1998). This new attention to differentiated criteria and to more precise specification of the linkages between personality and job constructs has led to interest in more detailed personality profiles than the five broad factors.

In one case Ashton and Lee (2005) referred to six dimensions instead of the five, and described the sixth dimension as honesty-humility (Mahlamaki 2010).

Because the English language has more than 15,000 words to describe personality traits (Goldberg 1991) personality and performance can now be defined by many other words

than the big-five dimension and facets.

This realisation and because of recommendations for further investigation (Goldberg 1999), this research use this premise as the stepping stone for developing the consultant project manager traits list. It examines studies that identify traits of the construction professionals and identify those relevant to defining the consultant project manager performance in briefing. This is in keeping with the developmental process follows by Goldberg (1991) whose guidelines employed the English personality inventory (lexical adjective) to define personality trait.

The development process therefore is particularly reflective of the construction management professionals trait description deemed relevant for defining the consultant project manager performance in briefing.

The process began by evaluating the list of traits recently identified by Atalah (2009). In this study he identified forty-seven (47) traits related to the construction management professional (table 4.3). These traits are related to decision-making roles in construction, and based on their lexical description appears relevant for defining the consultant project manager personality traits. Atalah (2009) developed this list by evaluating the performances of project manager, project engineer, project coordinators who work for architecture and estimator in decision-making roles. It was developed (SRI list) after evaluating 102 prospective employees through observations using the following eight pre-employment instruments: SRA Nonverbal Form, Kuder Career Search, Supervisory Index, How Supervise, Leadership Opinion Questionnaire, Sales Potential Inventory, NEO Prediction Indicator-Revised, and Teamwork. Importantly the study found that traits of the CMPs were significantly different from the general population in 34 personality traits, defined as follows conceptual ability, teamwork-KSA, conscientiousness, competence, self-discipline, assertiveness, achievement striving, activity, mechanical, extraversion, employees, dutifulness, gregariousness, deliberation, order, altruism, trust, human relations practices, positive emotions,

computations, agreeableness, supervisory ability, art, excitement-seeking, warmth, compliance, values, fantasy, supervision, communication, impulsiveness, angry hostility, office detail, and vulnerability, and not significantly different from the general population in 13 factors, namely: management, science/technical, consideration, total score, structure, feelings, ideas, sales/management, straightforwardness, tender-mindedness, human services, and openness, nature. Consequently there were no significant differences between the estimators and project manager except in the areas of human services and gregariousness.

The process did not indicate which of these personality traits are related to the consultant project manager for influencing the effectiveness of performance, and more particularly to what extent is the nature of influence for delivering an effective process, since each project is unique and may require specific traits to be successful? However it provides a basis for moving this direction.

Table 4.3 Personality traits relevant to defining the construction management professional decision-making roles

No	Trait	Trait description
1	Achievement striving	Aspiration Levels.
2	Activity	Rapid tempo and vigorous movement
3	Agreeableness	Altruism.
4	Altruism	Active concern for others.
5	Angry hostility	Tendency to experience anger and frustration.
6	Art	Interest in activities that make beauty.
7	Assertiveness	Dominance, forceful, and social ascendancy.
8	Communications	Interest in using language, either writing or speaking.

9	Competence	The sense that one is capable, sensible, prudent, and effective.
10	Compliance	Deference to others in reaction to interpersonal conflict.
11	Computations	Interest in activities that use numbers.
12	Conceptual ability	Ability to learn job requirements within a reasonable time.
13	Conscientiousness	Planning, organising, and carrying out tasks.
14	Consideration	Ability to develop job relationships with subordinates, characterized by mutual trust, respect, consideration, and warmth.
15	Deliberation	The tendency to think carefully before acting.
16	Dutifulness	Adherence to ethical principles and moral obligations.
17	Employee	Attitude toward the subordinates: knowing of their motivations and needs.
18	Excitement-seeking	Craving for excitement and stimulation.
19	Extraversion	Outgoingness.
20	Fantasy	Openness to fantasy.
21	Feelings	Openness to one's own inner feelings and emotions.
22	Gregariousness	Preference for other people's company.
23	How supervise	Supervisor's knowledge and insight concerning human relations in industry.
24	Human relations	Supervisor's techniques to handle problems, lateness, apathy, arguments.
25	Human services	Interest in helping other people.
26	Ideas	Intellectual curiosity.
27	Impulsiveness	Inability to control cravings and urges.
28	Management	Feeling toward top management, pay, company policy, benefits, plant regulations, and other aspects over which the supervisor has little control.

29	Mechanical	Interest in knowing how things work and using tools to make or repair things.
30	Nature	Interest in outdoor activities, such as growing or caring for plants or animals.
31	Office details	Interest in keeping track of things, people, or information
32	Openness	Willingness to try different activities.
33	Order	Characteristics of organisation.
34	Positive emotions	Tendency to experience positive emotions.
35	Sales/Management	Interest in dealing with people, such as leading a team of workers or selling ideas.
36	Science/Technical	Interest in discovering or understanding the natural or physical world.
37	Self-discipline	The ability to begin tasks and carry them through to completion.
38	Straightforwardness	Frankness, sincerity, and ingenuousness.
39	Structure	Ability to define a person's own role and those of subordinates to achieve goal.
40	Supervision	Attitude toward the duties and responsibilities of a supervisor; a person's annoyances, desires, and needs; feelings toward other supervisors.
41	Teamwork-KSA	Knowledge, skills, and abilities (KSAs) that predict ability to work in teams.
42	Tender-mindedness	Attitudes of sympathy and concern for others.
43	Total score	Individual's attitude about being a supervisor.
44	Trust	Disposition to believe that others are honest and well intentioned
45	Values	Readiness to re-examine values.
46	Vulnerability	Vulnerability to stress.
47	Warmth	Issues of interpersonal intimacy.

Source: Atalah (2009)

However, preceding Atalah(2009) Hartman (2008) evaluated personality traits and performance but focussed primarily on the project manager to determine influence on performance in decision-making in project. He evaluated traits that distinguish the best project managers from the rest and concluded that the exceptional project managers possess good decision making attribute which enabled them to detect and address problems quickly. This finding was based on observations from two approaches to ascertain the traits they have. The first approach was to identify project managers who were regarded highly by peers, clients and other project stakeholders. The process took many years of evaluation and discussion and a pattern emerged that, supported a common set of traits of project managers: First, those good project managers were able to identify problems, and their impact both instantly, could predict issues and challenges, and deal with them effectively. The resulting decisions were generally considered sound. Secondly, he observed project managers to identify those who demonstrated exceptional skills in building and maintaining relationships. This was underpinned by good communication skills. It was found that there was a high level of trust between the project manager and other stakeholders. Hartman (2008) based his second view of exceptional project managers on the work of the best” project managers to identify the five top attributes of project managers. These attributes were identified by the project managers themselves as well as by project sponsors. These are people skills, good leadership; listen, strong in team building, and verbal communication.

The consultants with these traits are likely to improve their chances and contribute to their success or failure in projects. The five traits the exceptional project managers’ possess are pattern recognition and decision making, relationship building, communication, integrity and trust. These are the intuitive ability Hartman referred to when he set out to highlight those traits required which are essential for the briefing process. The client engages the consultant because of the need to address a problem; the client also would have had a possible solution in mind. The consultant with the traits that encourage resourcefulness and problem solving encourages others to bring important knowledge and know-how during brainstorming sessions. This implies being

creative, tenacious, and knows how to use other resources effectively and highlight other issues of concern.

Petterson (1991), quoted in Bedingfield and Thal, Jr. (2008, p.142) summarised over sixty research that evaluated the traits of the project manager to aid selection for jobs. They identified five common traits area: problem solving, administration, supervision and team management, interpersonal relationships, and other personal qualities. Other studies researched trait attributes of the project managers and summarised them as follows; problem solving, administration, supervision and team management, interpersonal relationship, other personal qualities, knowledge, experience, and external factors. These findings have been further summarised to define selected project manager key personality attributes, which have been found to include leadership skills, communication skills, decision making skills, administrative skills, coping ability, analytical thinking, and technical competence.

The literature confirmed that the same common traits attributes are repeating, and from reviewing the studies of Atalah (2009), Hartman (2008), and Bedindfield and Thal, Jr. (2008) and the five factor facets, there were commonalities evident which suggests personality traits of the construction professionals is also consistent with specific dimensions of the five factors model, suggesting a link to performance..

Further it was discerned that the traits identified by Hartman (2008); Bedingfield and Jr.(2008) are also subsumed in the list of Atalah` (2009) (table 4.1). In other words after the various traits lists were synthesized (table 4.4) and an evaluation conducted key traits dimensions appear to be fairly consistent, meaning similar personality traits continue to be identified as common among each list.

Because of this realisation, the forty-seven personality traits of the consultant management professionals (Atalah 2009) which includes elements of the main dimensions and their lower order facets, and those mentioned in the above section, would be used in the study. The basis is, they are shown to define by their lexical

description (Goldberg 1999) the important personality trait of construction management professionals which are related to performance, and are thought to be suitable (based on the lexical description) as the benchmark for identifying and evaluating the influence of the consultant project manager traits in the briefing process.

Because it is unlikely any one consultant project manager would possess all these traits, it is essential to determine which personality traits influence the performance of the consultant project manager for delivering an effective briefing process.

Table 4.4 Summary of Construction management professionals and lower facets of Personality traits

Trait	Atalah (2009)	Hartman(2008)	Bedingfield and Thal, Jr.(2008)	Pettersen(1991)
1	Achievement striving	Problem-solving	Assertiveness	Problem solving
2	Activity	Decision-making	Warmth	Administration
3	Agreeableness	Good leadership	Gregariousness	Supervision and team management
4	Altruism	Communication	Activity	Interpersonal relationship
5	Angry hostility	Team-building	Excitement seeking	Personal qualities
6	Art	People skills	Positive emotions	Knowledge
7	Assertiveness		Trust	Experience External

				factors
8	Communications		Straightforwardness	
9	Competence		Altruism	
10	Compliance		Compliance	
11	Computations		Modesty	
12	Conceptual ability		Tender-mindedness	
13	Conscientiousness		Competence	
14	Consideration		Order	
15	Deliberation		Dutifulness	
16	Dutifulness		Achievement striving	
17	Employee		Self-discipline	
18	Excitement-seeking		Deliberation	
19	Extraversion		Fantasy	
20	Fantasy		Aesthetics	
21	Feelings		Feelings	
22	Gregariousness		Actions	
23	How supervise		Ideas	
24	Human relations		values	
25	Human services		Anxiety	
26	Ideas		Angry Hostility	

27	Impulsiveness		Depression	
28	Management		Self- Conscientiousness	
29	Mechanical		Impulsiveness	
30	Nature		Vulnerability	
31	Office details			
32	Openness			
33	Order			
34	Positive emotions			
35	Sales/Management			
36	Science/Technical			
37	Self-discipline			
38	Straightforwardness			
39	Structure			
40	Supervision			
41	Teamwork-KSA			
42	Tender-mindedness			
43	Total score			
44	Trust			
45	Values-standards			

46	Vulnerability			
47	Warmth			

4.3.3 The patterns of behaviour of the consultant project manager

There growing recognition that the complexities of project require different approaches to their management has shifted the focus to engaging management procedures tailored to the needs of the project. The literature suggests attempts are made to individual with appropriate competencies to match job situations (Muller et al. 2007). These characteristics define behaviour and individual's differences. Muller et al. (2007) building on concepts of thoughts derived the known traits schools, such as the behavioural, contingency and visionary schools of leadership, the emotional intelligence school and the competency school, contend personality traits and behaviour are distinctly separate, and explain each other differences. These differences, especially between professionals are due to personality traits differences (Boeree 2006).

Consistent with these findings, the situation of the leaders in his role, generally display traits appropriate to the circumstances. This is highlighted in the trait school theory on effective project leadership that contextualised the behaviour of the project manager and linking it to the influence of trait. Similarly the behavioural schools believe the exhibited styles of the project leader are influenced by traits which are; problem solving ability; result orientation; intuition; self –confidence; perspective; communication; and negotiation ability (Turner 2005). These traits are specific to the project manager leadership in the process of project planning, implementation and commissioning. Turner (2005) however did not mention whether these traits are necessary effective in the delivery of all types of project (Muller et al. 2007).

The notion that there are different patterns of leadership behaviour displayed are relevant for evaluating differences in to determining the consultant project manager

performances, especially in the briefing process(Jacques et al. 2008).

4.3.4 Personality and performance of the CPM in construction briefing- involvement of the client

The difference between an effective brief and an ineffective brief is that effective briefs provides the design and construction teams with a clear picture of what is required to satisfy the client requirements, whereas an ineffective briefs is not explicit in this regard and may have contradictory information and objectives. In such circumstances the client involvement is to make as explicit as possible the project requirement. The client therefore requires the consultant project manager to deliver an effective briefing process. The effectiveness of performance therefore will therefore be the basis by which the consultant project manager performance is measured, in terms of satisfying the client requirement accurately.

It therefore holds that the requirements will be established by the client whose involvement at this critical phase is primarily to identify project parameters will act as the key performance indicators. Normally they are presented in the form of a client brief, which provides an overview of the client's business case, and incorporating the specifications of the project. The project therefore will be deemed effective if the outcome of the process satisfy the client requirements (Bowen et al. 1997).

It has often been assented that achievement can be explained largely by factors such as individual effort, initiative, and merit (Judge et al. 2008), however based on the personality and performance theories, a significant determinant of effective performance is personality. Cognitive abilities as measured by education, skills or previous experience may also influence work performance success in a way that would attenuate the relationship between personality and performance (Linz et al. 2008). However the recognition of the non-cognitive factors such as personality traits is now an important

component used to explain performance differences among individuals with similar work experience (Linz et al. 2008). Further the dispositional factors that are related to effective performance are those which facilitate a systematic approach to achieving the requirements of the client, and though this can appropriate to size and nature of the project which are dynamic and continuous process, ultimately it the client satisfaction factor which will determine the effectiveness of the process. For these reasons alone it is essential the consultant project manager understands clearly the requirement of the client. Involvement therefore is essential from the outset.

The success (or effectiveness) of the consultant project manager performance can be divided into two components namely, extrinsic and intrinsic components, where extrinsic success is relatively objective and observable and typically consists of highly tangible outcomes, whereas intrinsic success would be a subjective appraisal of an individual success, commonly expressed in terms of job satisfaction (Judge et al. 2007). The idea that extrinsic and intrinsic effective performance can be assessed as relatively independent outcomes, suggests both aspect correlate moderately.

Importantly, the commonly used criteria to index effective performance are satisfaction which is noted as a significant requirement in the briefing process and must corroborate with the requirements for the client. In other words, as a performance indicator, satisfaction is essentially the cornerstone of client expectations and plays a fundamental role in determining effectiveness of performance.

On the basis that measurement of satisfaction is often associated with performance, also includes the proficient way in which these indicators are achieved. As such the outcome of the briefing process would be based on the efficient manner in which the consultant project manager execute the task performance stages, especially relating to data gathering to be analysed and synthesised for the effective development and functioning of the project. This also includes establishing good teamwork, and interpersonal relationships to determine whether the client requirements are the solution

to the client problems.

Once more personality traits play a role and though the influencing nature will not be ignited suddenly, the social effectiveness skills will spur it into motion, to show personality influence (Hogan and Holland 2002). By operating in a social environment, where interpersonal relationships is encouraged for effective briefing the implication is, a strong personality prediction of performance would influence effectiveness.

It is not probable that all individuals performing within these diverse circumstances, when judged to be functioning at a high level of success will hold the same traits, because different sets of personality traits will likely be congruous with the achievement levels of different occupations (Day and Silverman 1989). Particularly since job performance is usually directed around one's personality.

4.4 Measurements and identification of personality traits of the CPM

When engaging the consultant project manager the client would be engaging a candidate and assessing whether he (she) possess the attributes suited for the job (Judge et al. 2007). Broadly this is assessing whether their personalities are suited. However this process is only as good as the client and stakeholders assessing the consultant project manager. Because the client and representatives may not be good at detecting the best traits that predicts effective performance may complicate the process. For these reasons Meta-analysis studies that have continued to propagate personality testing to measure personality traits influence.

Some experts urge measurement and assessment at the very highest level of the hierarchy, emphasising extremely broad and super ordinate constructs (Ones, Viswesvaran, and Schmidt 1994; Schmidt, Ones, and Hunter 1992). Others advocate a lower but still broad level (e.g. that afforded by the Big 5, Barrick and Mount 1993) or Hough's nine-factor taxonomy. It is important to note that measuring 30 facets of traits

at the lower level of the trait hierarchy allows one to combine them into five broader domains, alternatively to combine the five domains into broader construct such as integrity (Ones et al. 1993) or Hogan's Sales Potential (Hogan and Roberts 1996), Managerial Potential (Costa and McCrae 1992).

Gatewood and Field (2001) found traits are continuous dimensions on which individual differences may be measured by the amount of attributes the individual exhibits. On the other hand Inwald and Brockwell(1991) observed and identified traits in specific situations, and rated their influence on performance of government personnel. They employed instrument for rating on a four-point global Likert scale and this was done over a nine to twelve month's period of observation in their current employment. In these cases results suggest that the MMPI measuring instrument first accurately predict employees' performance based on rating to 74.3% of the time ($p < .001$) and the IPI accurately predict performance ratings 69.7% of the time ($p < .001$). It was found that personality traits had an influence on performance thereby influencing the selection process for the jobs. Though the focus of the study was on the suitability of the measuring instruments the traits associated with the individuals were evaluated and these were found to have an impact on the performance of the employees, thus key to determining performance levels the employees.

Shweder and D'Andrade (1979) used the direct observation technique to identify and rate personality traits of individuals to evaluate their behaviour in a natural setting. They considered data from memory and compared with recorded (observed) data to determine which is more reliable, as this was the basis of the study. A key finding of the study is that the observed trait data influenced behaviour and performance and when rated it was also possible to correlate the results based on the ratings data (Romer and Revelle 1984). Shweder and D'Andrade (1979) reviewed results of seven studies and found that even in observation and memory- based (ratings) settings there is a large correlation. The observer rating data were average $r = .75$ to a greater degree than the behaviour correlations (average $r = .26$). They concluded that trait ratings by

observations contain considerable cohesion and structure and the Pearson and Spearman correlations analysis is statistically applicable. Further Hills (1990) in an article wrote the simple observation technique has been validated and a strong instruments for observing and measuring personality traits.

These reviews illustrate the usefulness of the direct observation and rating trait techniques by lay persons, first to identify traits in natural setting and second to used the data to evaluate the influence of those personality traits in the briefing process. Using these technique there are also the opportunities for self-understanding of traits influences.

4.4.1 The validation of personality and development of measures

The validity of personality traits measures has gained recognition through meta-analyses performed by various researchers (Barrick and Mount 1991; Tett, Jackson and Rothstein 1991). These reviews are often used synonymously with personality dimensions and the findings have often shown that personality trait measures are useful predictors of job performance (Blickle et al. 2008; Barrick & Mount 1993).

Though the concept is used extensively to describe performances in various context, it is not job specific, but provides a substantial revision of how positively applied psychology views personality assessment as an instrument for assessing performance through analysis(Hogan 2003).

Lee (2007) contends that this vast assortment and collection of personality assessments instruments are sound characteristically, because they are generally developed according to the author's unique theory/ perspective and offers a different approach to personality measurement. However some common elements exist across almost all approaches. Personality is a combination of internal, intangible characteristics and therefore cannot be measured directly.

Instead, psychologists rely on self-reports of a person's thoughts, feelings, preferences, and/or behaviours to assess personality, that is, they ask people questions about themselves, assign numerical values to their responses, and use these values to generate a portrait of the person taking the assessment. Each question included in a validated personality assessment will have been carefully crafted to tap a specific personality characteristic.

There is therefore plausibility in measuring the consultant project manager performance. Hogan and Shelton (1998) and Hogan (1991) theory of personality dimensions influence suggests measurement of traits to be essential for predicting performance in an environment where social cohesion, teamwork and interpersonal relationships exists and by implication strong personality possibilities exhibits are good predictions of the level of job performance in the briefing environment?

Consequently the new perspective organizes the consultant project manager performance in the briefing process into broad themes, for example: (a) working with stakeholder to move the process from conception to identifying the client project requirement, and (b) personality traits descriptive content categories. This is particularly important for this research since it provides valuable guidance on establishing a correlation between personality trait and performance in a specific environmental contexture.

Because the goal of personality measurement is to describe individuals as they are seen by others, the responses to the assessments will help classify and differentiate consultant project managers, thereby providing a basis for understanding actions and predicting future behaviour. It is important to note that not all personality assessments are created equal. Any personality assessment used in selection must, at a minimum, demonstrate adequate reliability and validity. An assessment is considered reliable if scores remain consistent over time, that is, when an individual completes the assessment on multiple occasions, his or her score should be approximately the same each time. It is the same

yardstick in the case of the consultant project manager assessment.

4.4.2 The accuracy of personality assessment in predicting job performance

One feature of personality assessment is that it is based on statistics and probabilities (Lee 2007). This enables with more certainty the opportunity for evaluating an individual performance to determine whether the individual will be effective. In most cases this process is found through correlation relationships. Correlation coefficients are standardized continuous values that indicate the strength and direction of the relationship between two variables (e.g., assessment scale scores and job performance ratings) and range from -1.0 (strong negative relationship) to 0 (no relationship) to 1.0 (strong positive relationship). The accuracy of personality assessment has been shown in the work on validity studies by Anderson (2007). In this validity study it revealed the link between individuals in specific job situation to personality traits. In considering these results, the initial validity evidence provides strong support for the accuracy and job relatedness of inferences for job types (Lee 2007) and is taken on board in this study.

4.5 The benefits of using personality assessment

The various instruments to predict relationships offer several advantages over other types of selection tool. One of the features of personality assessment and measures is in the predictability for selecting personnel for job roles (Shelton, 2004). The ability to simplify an otherwise overwhelming number of traits (Hoekstra 1993; John 1990), their cross-cultural applicability (McCrae & Costa 1997b), and their ability to predict outcomes is the hallmark of assessment. Although the adequacy of the five-factor model of traits is debated (Block 2000), the measurements techniques are currently in wide use (Widerman et al. 1998). However, regardless of the differences in emphasis and

interpretation of the concept, there is general agreement among investigators that they are addressing the same phenomenon” (Costa & McCrae 1992a, p. 653).

The most important thing about personality assessment is that, unlike other types of assessments (e.g., cognitive ability), personality assessments demonstrate little or no adverse impact; that is; they generally do not discriminate against members of protected groups or classes (Lee 2007). Whereas with cognitive ability tests, for example, have generally resulted in adverse impact on certain demographic groups, personality assessments does not. This is especially troublesome given the “Uniform Guidelines on Employee Selection Procedures” requirement that alternative selection methods must be investigated in order to reduce adverse impact as long as the accompanying reduction in validity is not too large. Personality and integrity tests, however, typically demonstrate only slight differences between important demographic groups (e.g., age, ethnicity, and gender). Therefore, personality assessments can be implemented into selection procedures as a way to increase predictive validity and reduce the potential for adverse impact.

Assessment can be expanded to include performance associated with attitudes, and preferences in decision making. This conclusion is based on the premise that people interact to share, exchange and gather information and therefore arrive at decision from varying perspective appropriately. This notion is premised on the behaviour of participants in any organizational setting, particularly at the conceptual stage of a construction project. To which he contended is a function of both personality traits and contingency variables (Carr 2000).

In the context of construction project whether at the conceptual phase of the project cycle, design or construction phase, these are issues that will drive the behaviour of individuals in the performance of critical tasks. These are the traits Jungian psychological theory referred to. The role of the individual’s behaviour, driven by the attitude and functions of their personality, will become a clear and significant

contributor and these attributes can be measured. The well-constructed measures of normal personality are valid predictors of a wide range of occupational performance, they generally do not result in adverse impact for minority groups, and they can be linked to performance defined in terms of productivity. According to Jang and Lee (1998) because every activity in the cycle of a project, from initiation to completion, that engage key participants has a quality dimension to it, then each of those activities must be performed as effectively and efficiently as possible, otherwise this can lead to failure. This supposes that potentially as a significant trait impact on project quality. But in order to achieve a project's best results it is important that personalities are matched to specific job functions, work teams, and even project phase. This is a case of different set of personality traits driving actions, for which the impact can be either success or failure.

From the summations the validity of personality traits as an influencing factor for predicting of performance, it seems reasonable to expect that these personality factors should play an equally important and valid role in influencing the briefing process.

4.6 Conclusion

The purpose of this chapter was to investigate personality traits and their influence on work performance, specifically as they relates to the performance of the consultant project manager in construction briefing. This was done to develop a broad understanding of personality trait influence on work performance and to consider the extent to which the concept of personality trait influence is applicable to the consultant project manager performance in the briefing process.

The literature was reviewed to understand personality traits and influence on job performance. The process encompass a review under the following areas, namely

personality traits, personality traits assessment in construction briefing, measurement and identification of personality traits of the consultant project manager, the benefits of using personality assessment to shed light on the universal application of personality traits. It is found that personality traits are predictors of performance in job settings and are measurable, identifiable and generally correlate with performance (Atalah 2009; Hartman 2008; Carr et al. 2002; Barrick and Mount 1991). The literature has consistently shown that individual performance and behaviour is linked to personality construct and therefore variations in performance can be explained by the personality traits theory. Similarly it is shown that personality traits can be employed to make explicit the interpretation of actions of individual and so upon identifying specific traits associated with performance or behaviours interpretation can be placed to express the impact of those traits. This is the strength of the lexical description of traits as they provide a basis for defining all individual action within the confines of the five-factor and factor dimensions and beyond (Goldberg 1991).

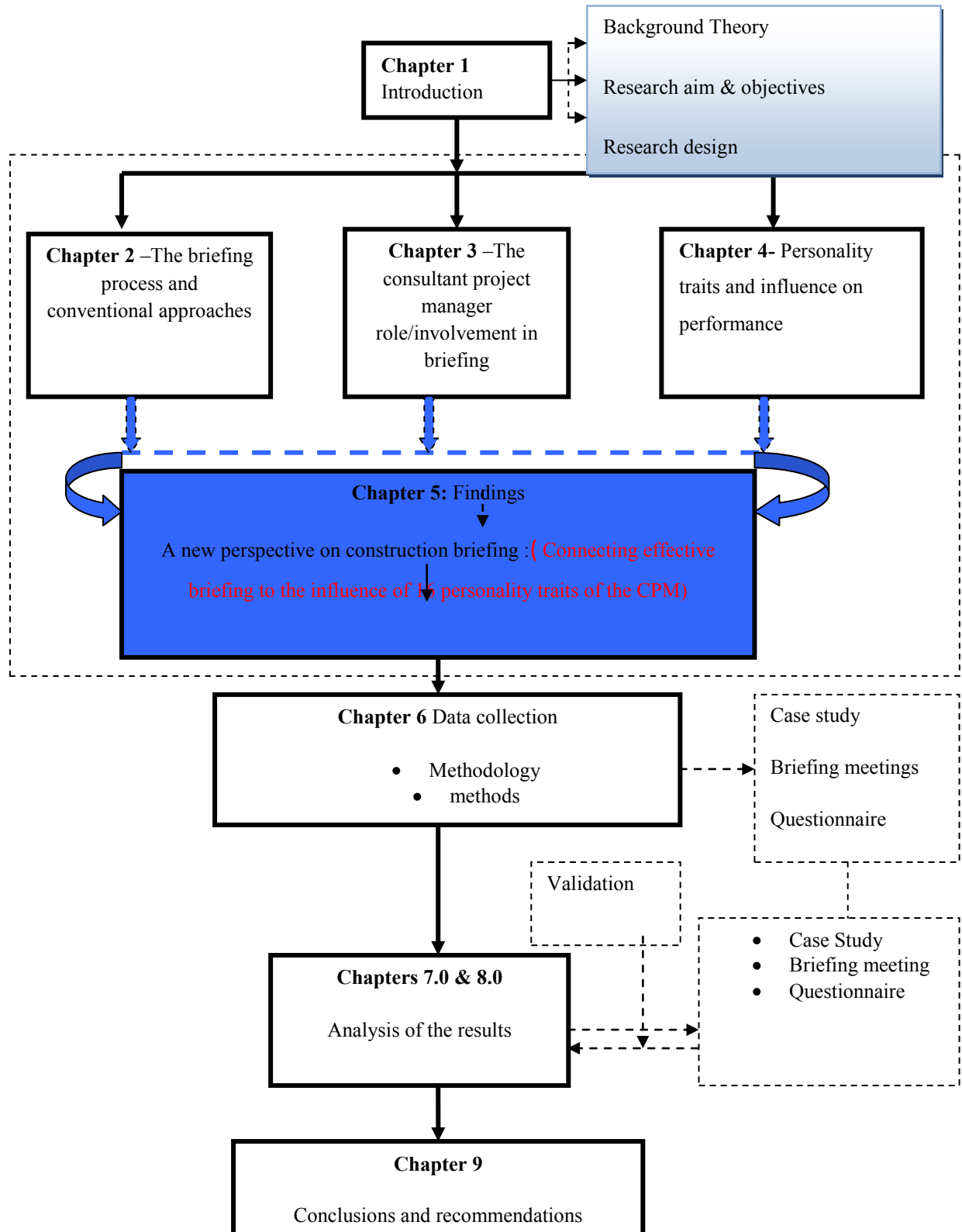
In light of the review it is discovered that the key to explaining differences in individuals and more particularly the disconnect between the various approaches of the consultant project manager is down to individual differences due to personality traits, which can explain the various levels of performance in the briefing process.

Further, it has been found that there are specific personality traits associated with the construction management professionals in decision-making roles in construction, and can likely defines the relationship between personality and performance of the consultant project manager in the briefing process. These traits are observable and measurable in specific job situation. From the concept of the trait theory these traits provide a basis for explaining influence and in particular individual performance, for example the outlook of an effective construction project manager differs from that of an ineffective consultant project manager (Hartman 2008), both roles showed specific personality traits.

Importantly the trait base concepts applicable to the consultant (project manager) and other stakeholders in current day approaches are discovered to hold significance for predicting performance in general, including the construction sector. The understanding is that personality traits influence individuals' performance and do have a place in research to look at the influential nature of these traits, for an understanding of how this can influence the consultant project manager performance in the briefing process.

The conclusion is that trait influence on performance is based on trait composition, which can also be explained by the gold standard (the big five concepts) and the list of traits associated with the consultant project manager. In conclusion the theory of personality suggest performance trait assessment allow the consultant traits in his role to be evaluated to provide a full determination of the effects on performance in the briefing process. It is believed these traits have an influential effect on effective performance (Zaccaro et al. 2001) and more importantly it is essential that the influence of personality traits on the consultant project manager performance be known to contribute to improving the effectiveness of the process.

Chapter 5 A New Perspectives on Construction Briefing



5.1 Introduction

The purpose of this chapter is to introduce the new perspective on construction briefing. The new perspective is based on the finding from the literature review and the theoretical basis is developed utilising the literature on personality traits and influence on performance.

5.1.1 Findings

The preceding chapters reviewed the literature on construction briefing and conventional approaches adopted by the consultant project manager, the consultant project manager involvement in the briefing process, and the influence of personality traits on work performance. This was undertaken in order to gain fresh insights and understanding about current briefing practices, personality traits and performance and consultant project manager involvements in the briefing process. Key findings have emerged which suggest that although construction briefing is essential for project success and a critical arm of the construction process, the issues relating to its implementation and ultimately effectiveness are still problematic and it is increasingly accepted that the effectiveness of the process needs improving and this is a widely supported view in the construction sector (Bouchlaghem et al. 2000). Other significant and key findings which emerged from the review include the following points:

- Construction briefing is increasingly accepted as a rational process, involving many different personalities such as the consultant project manager and other key stakeholders brainstorming issues to identify and define accurately the requirements for the project. Essentially this process begins with information gathering, where the data gathered is analysed and synthesised for decision-making and decision implementation, to establish the standards. The

effectiveness of the process is measured by client satisfaction, which is indicative of the performance of the consultant project manager (Yu et al. 2008).

- It is found that the brainstorming process is an essential stage of the process. It encourages sharing of ideas, feedback, good teamwork and interpersonal relationships to aid the decision-making process.
- It is found that the approach to briefing strongly suggests a personal undertaking of the consultant project manager, based on understanding of the client requirements. Personality traits are found to be the likely source of influence.
- It is found that there are forty-seven traits related to the performance of the construction management professionals, and explains why performances often vary. These traits by their lexical description can define the performance of the consultant project manager in the briefing process.
- It is discerned clients have been employing external consultant project managers consistently on the basis that they bring specialised knowledge and experience to undertake the process. This is instead of using in house architect as project managers. It is found to be a best practice recommendation because it is thought specialist knowledge will achieve the requirements, established as the key performance indicators.

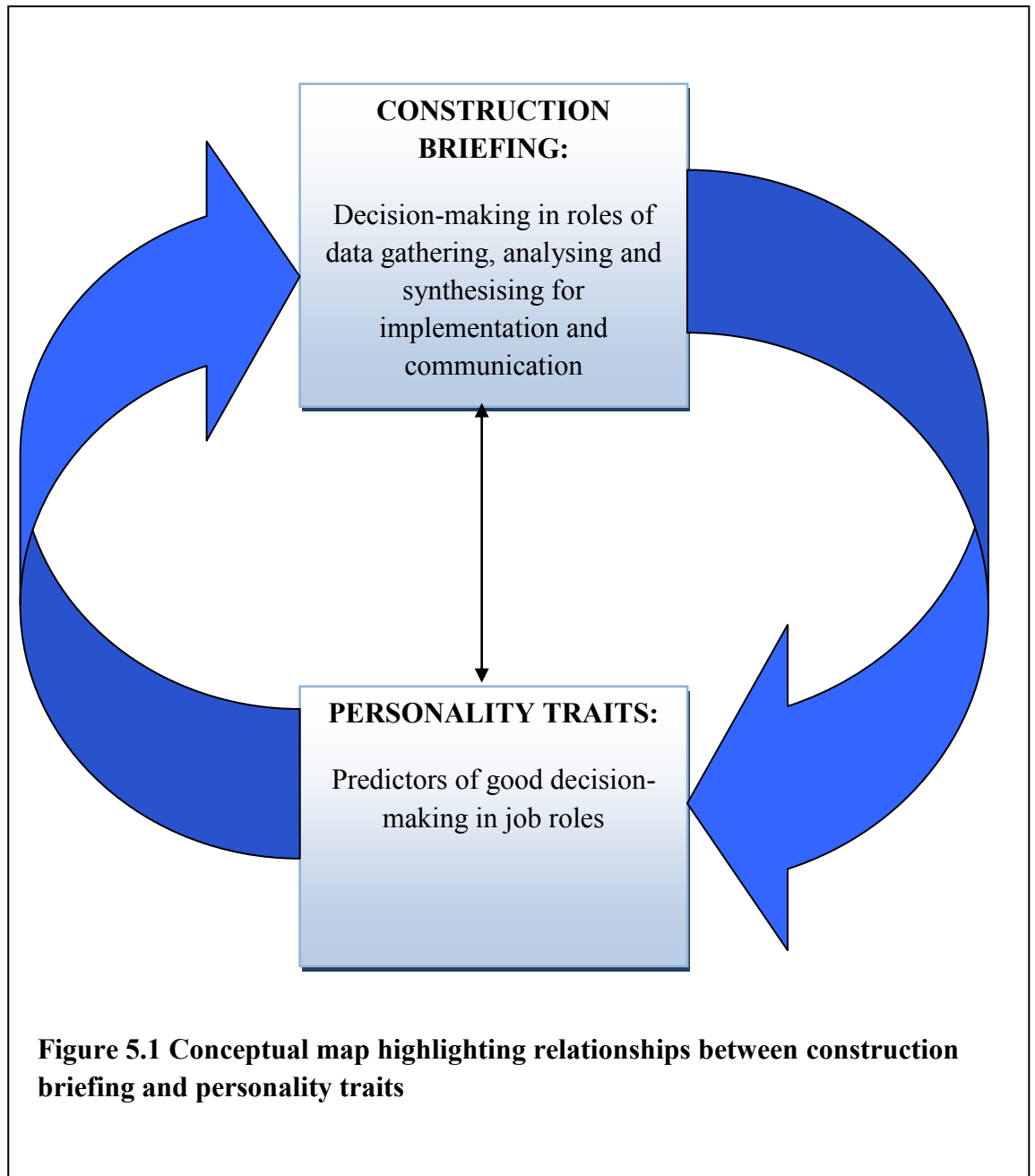
But even the work of the consultant project manager shows variation in performance and there are different levels of outcome experienced.

It is therefore not surprising that many in the construction industry still consider construction briefing to be problematic and outcomes still vary consistently. These issues have raised many concerns for the client organisation seeking to ensure their

projects perform satisfactorily. Presently client organisations are selecting from among consultant project managers accessible based on cognitive abilities. Hence it is prudent for them to select the consultant(s) whose performance in similar or previous projects was effective (on the basis of recommendations), but there are significant risks with this approach. The most notable is, clients may not be aware that the consultant does not possess the traits to allow him or her to be effective in construction briefing.

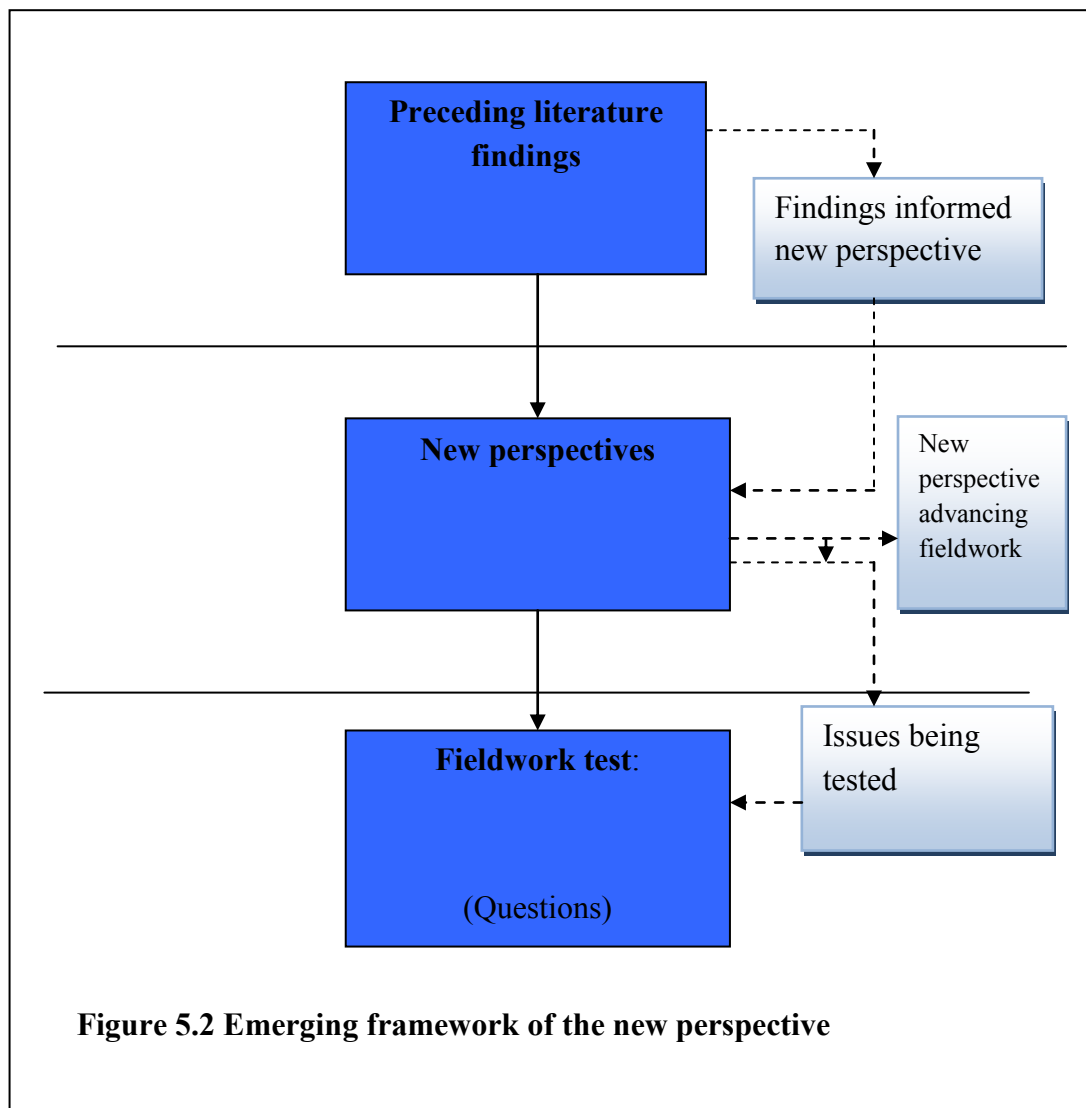
This can be avoided if there is the courage and sound criterion for selecting effective consultant project managers. The risk may reduce if the right consultant project manager is employed. This is articulated in Schmitt et al. (2003) model of performance.

For example; in Schmitt et al. (2003) model of performance reference is made to effective performance being influenced by personality traits. If we extrapolate from the model to the situation of briefing performance, where effective briefing can be viewed as the consultant project manager making the correct decisions about the client requirements, which satisfies the client (Construction excellence 2004) and wherein making the correct decisions to the satisfaction of the client also means satisfying expectation, then the performance of the consultant project manager in the briefing process can be integrally linked to the influence of personality traits. Baker (2008) contended that decision-making is influenced by personality traits. Similarly the occupational psychology literature noted that personality factors are deemed to be effective predictor's performance. Therefore, since it is suggested in the model that effective construction briefing is premised on effective decision making where the execution of the tasks can be viewed as effective performance by the consultant project manager, as such it is likely personality traits factors affects effective construction briefing. This conception is illustrated below (fig. 5.1) to highlight the connections and define influence.



5.2 The new perspective

With these emerging findings and on the basis of effective performance being related to personality traits, the new perspective introduces a new perspective on construction briefing. The new perspective is a significant shift from the conventional approach of many professional bodies and scholars, including construction professionals, in the way they interpret the construction briefing process. These individuals and entities (professional bodies, academics and scholarly briefing methods) have suggested best practices and, guides (CIB 1997; O'Reilly 1987; RIBA1973; Morris et al.1998; Yusuf 1997; Salisbury1990; Newman et al. 1981) to define the briefing process as a prescriptive framework where the tasks are carried out in sequence, while emphasising key stakeholder's role , particularly the consultant project manager interacting and brainstorming issues to identify and define the client requirements (Franks 1999a). As such the new perspective which incorporates the earlier findings (illustrated in fig.5.2) explains the consultant project manager performance in the context of personality traits inducement, and therefore interprets the construction briefing process based on what is said to be an understanding of the influence of personality traits in delivering an effective briefing process which satisfies the client expectation.



- Because the new perspective is advancing a concept that links effective performance of the consultant project manager to personality, it explores the briefing process further in order to gain an insights of how personality impacts on performance, so when evaluating the influence on effective briefing process, the concept can be correctly advanced. The theory of Pearce and Ravlin (1987)

which suggest that individuals who perform effectively are those who possess specific personality traits, adequately satisfy this concept. This heterogeneity is also useful for explaining the role of the consultant project manager in the construction briefing process where decision-making are called for.

Importantly, the industry professionals advocate to begin the process for identifying the client requirements starts with reviewing the records on the business operation (RIBA 1973; CIB 1997), this advocacy does not consider individual personality influence, but suggests, to identify requirements the process should follow a sequence of activities step by step and in this way, the consultant project manager will effectively identify the client requirements. This may be true and at a certain extent effective construction briefing can be achieved. Thus it may be plausible to suggest that certain consultant project manager can achieve these expectations adapting to changing circumstances with less effort than others. But based on the personality and performance theory and the theory of individual differences (Boeree 2006), there is certainly not one single personality type, which would form the ideal consultant project manager, which is not surprising because different traits have proven useful in one situation, while having the apposite effect in another instance (Barrack and Mount 1991).

5.2.1 Field work

The discussion about improving the briefing process by having the consultant project manager with the ideal traits can be characterised by personality traits that underpin performance in the briefing process. For example effective decision making in the data gathering process, establishing good teamwork and interpersonal relationships, good social interaction teamwork and communication, which are essential characteristics for defining the client requirements. Because personality influence

performance, the manner in which these tasks are carried out can be defined within a framework of personality traits which induce action of individuals in job performance. On the basis that the new perspective seeks to introduce the concept of performance influence from the standpoint of personality influence, requires a sufficient basis for investigation and examination to be able to link the consultant project manager performance to personality. To this end the field work provide a platform to satisfy the research objective, because to evaluate the performance of the consultant project manager for delivering an effective process and linking the outcome to the function of personality traits can only be done if we have a common medium to observe the process thereby able to identify the specific personality traits which defines performance. This is achieved with the application of a suitable survey method which is a validated instrument for measuring personality.

5.3 Propositions

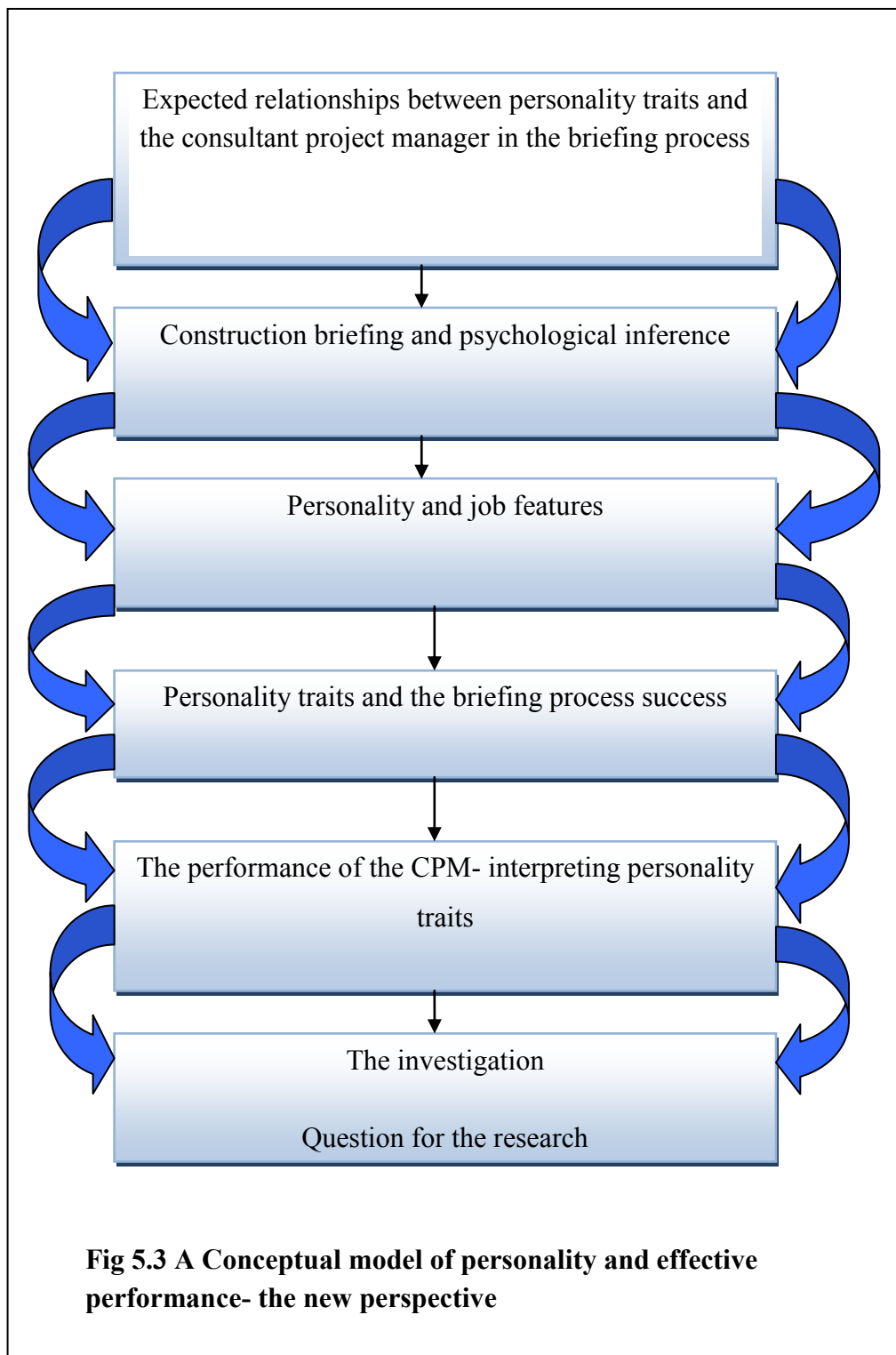
The research contends the performance of the consultant project manager in construction briefing can be explained by personality traits. Starting from the premise that it is widely acknowledge the briefing process needs improving (Bouchlaghem et al. 2000) and that performance can be related to personality, thereby resulting in numerous outcomes, it is essential to consider how personality traits influence the consultant project manager performance in delivering an effective briefing process. As such the important issues under consideration are performance (i.e. the tasks involved to identify and define the client requirements that satisfy the client expectation) and personality.

This study therefore proposes (firstly) that performance of the consultant project manager in the briefing process is related to personality traits which influence performance. Some personality traits have been shown to correlate highly with effective performance, as such the study contends that effective performance of the consultant project manager is related to personality traits which influence effective performance.

The stronger the relationships, the more significant performance are influenced; consequently it is better able to predict the effectiveness of the consultant project manager and ultimately the effectiveness of the briefing process. In other words if the consultant project manager possesses the traits which influence effective performance the likely outcome would be a successful process thereby presenting the consultant project manager as ideally suited for extracting an effective brief.

Finally, since it is proposed that personality influences the consultant project manager performance, and whereas performance in the briefing process also includes establishing teamwork, social interactions, persistence, good interpersonal relationships at work, which leads to a number of outcomes, ranging from improved social interaction, good awareness of the client issues, better knowledge of the job, greater respect from team members and a successful outcome, then these factors when combined can pose great challenges for the consultant project manager. As such the research discusses the most important and empirical supported linkages between personality and effective briefing in a structured manner (illustrated in fig 5.3). The nature of the structure is a simplification of the process, linking the key issues considered critical to the objectives of the research, especially since it is possible to have several other links to performance. Further this simplified structure is essential because there appears to be insufficient studies that discuss the relationships between personality and performance in briefing at the present time, and so the structure is patterned on empirical results still in existence.

To demonstrate the relevance of this structure (fig 5.3) it is first necessary to determine the expected relationship between personality and the consultant project manager performance in the briefing process as it relates to satisfying the client requirements. This is the subject of the next discussion, followed by discussions on the other areas considered essential and outlined in the structure (fig. 5.3) to have a complete discussion on personality and performance in briefing.



5.4 Expected relations between personality traits and the consultant project manager performance in the briefing process

To determine whether there are links between personality traits and performance in briefing, we correlate personality traits (independent variables) with effective briefing performance (dependent variables) and explained these phenomena by referring to studies which link facets of the process to personality traits. The study of Schmitt et al. (1984) ideally provides a sound basis for doing so. In this study the validity of personality measures across occupation for different job criteria was investigated and it was found that there exist an acceptable rating of validity for performance and personality relation($r = .206$). Atalah(2009) validity measure of traits in decision-making roles also found a correlation coefficient of $r = .024$. It is also found that the relationships between personality and the construction professionals have shown positive correlations, signifying relationships. In one case the correlation coefficient is $r = .75$, where $p < 0.05$, $r = .29$, $p < .001$).

It is therefore likely that if these traits are associated with the consultant project manager performance in briefing, then relationships will be found between personality traits and effective performance, ultimately effective briefing. Therefore if a reliable indication of the consultant project manager performance is a function of specific personalities that are predictive, then logic follows that the validity coefficient of personality and performance correlation should be within an acceptable range to support the propositions.

Within the Big-Five personality dimensions consideration is given to studies which discuss the relationships between key strands of briefing and these dimensions (notable in the list of forty-seven, table 4.4) and performances, but which characteristics are relevant to the briefing process, to link effective performance of the consultant project manager to these traits, and further to focus, on the potential of other traits from the list of forty-seven to influence performance. The discussion therefore focussed on

the nature of traits influence on the performance of the consultant project manager.

Barrick and Mount (1991) found conscientiousness and emotional stability are valid predictors ($r = .20$) of all job performance criteria and so we expect conscientiousness to be a valid predictor of the consultant project manager performance in the briefing process, because it assesses similar characteristics, (such as persistent, planful, careful, responsible and hardworking) which are important trait attributes for accomplishing work tasks in all jobs, including briefing. It shows one of the strongest and generalised relationships with job performance. This demonstrates that persons who are responsible, dependable, persistent, and achievement oriented generally performs better than those who are not.

The dimension of extraversion was found to be a valid predictor for two occupations involving social interaction, management ($r = .18$) and sales ($r = .15$). Seibert and Kraimer (2001) found that extraversion positively predicted job satisfaction ($r = .15$). Kammeyer-Mueller (2000) found that extroversion was significantly related to seeking feedback ($r = .18$) and building relationships ($r = .23$), while openness to experience was related to feedback seeking ($r = .16$)

Relationship building was related, in turn, to social interaction ($r = .20$), role clarity ($r = .20$) and job satisfaction ($r = .18$) while feedback seeking was positively related to job satisfaction ($r = .20$) and negatively related to outcome ($r = -.19$).

Because the briefing process is also about getting feedback and management, we expect management traits to be valid predictor of the consultant project manager performance in briefing. Similarly we expect openness to experience to be a valid predictor of the consultant project manager performance, because it assesses personal characteristics such as intelligent, open-minded which are key to successful briefing performance (Barrick and Mount 1991).

Howard and Bray (1994) noted that dominance was correlated ($r = .28$) with

managerial advancement.

Evidence suggests a relatively modest but positive relationship between agreeableness and job satisfaction ($r = .17$). Seibert and Kraimer (2001) found that agreeableness negatively predicted career satisfaction, though the effect size was rather small ($r = -.09$, $p < .05$). Conversely, Bozionelos (2004) found that agreeableness positively predicted subjective success ($r = .18$, $p < .05$). What is more intriguing is that agreeableness appears to be negatively related to career success.

Judge et al. (1999) found that agreeableness was relatively strongly negatively predictive of extrinsic career success ($r = -.32$, $p < .01$), and Boudreau et al. (2001) found that agreeableness negatively predicted all aspects.

Other Traits {section four (4.3.2)}. The big five dimensions does not exhaust all the traits that may be relevant to defining the consultant project manager performance in the briefing process. Burke (1993) argues that in the big five conscientiousness we have only scratched the surface of traits that might prove useful. It was thought the big five dimension was the end all. However based on based on the evidence there are considerable advances made in our understanding of the dispositional basis of effective performance, for which further development is needed (Goldberg 1999). In addition, there is also a need to investigate factors that explain the relatively modest and apparently inconsistent results, because models that investigate the influence of personality traits on performance will contribute to our understanding of the specific mechanisms by which personality leads to effective performance. This can be applied to performance in the briefing process for an improved briefing process.

In the above discussion these traits were related to performance across various occupational. It is therefore plausible that they are related to effective briefing performance. As a consequence we hypothesised that several other personality traits noted in the list of forty-seven (table 4.4, Atalah 2009) are valid predictor of the consultant project manager performance. In other words we expect personality traits

including aspects of traits other than the five factors and lower order dimension to be related to the performance of the consultant project manager in the briefing process. Likewise, the stronger the relationship the more likely performance will be effective and, in the context of briefing the more likely for an improved briefing process.

5.5 Construction briefing and psychological inferences

The process of data gathering and brainstorming issues in the briefing process requires coordination of efforts of key participants by the consultant project manager. This involves making the right decision in relation to project requirements. The effectiveness of which can be understood from reviewing the correct information which inform discussions among individuals. In the quest to seek information to support the decision making process, there are instances where the information can be distorted to satisfy the decision-making requirements, or to lessen the consequences of the decision (Baker, 2008). This would suggest that the process of co-ordinating and managing the information seeking process has many psychological issues which come into play in a logical and rational manner (Heinstron 2003). The emerging of the psychological factors is also portrayed in behavioural dispositions as a result of the nature of personality influences (Johnson, 1998). In extrapolating from Wilson's (2000) model of information behaviour there are psychological influences which are, role and interpersonal related that characteristically influence the information-seeking process (Heinstron 2003). The construction briefing process which is generally pivoted on an information based process whose effectiveness is linked to the kind of decisions made is therefore likely to involve psychological issues which influence the process.

Further, the decision making process is cognitive and is based on the information sought. This is also dependent on motivation which appears to have a cognitive origin, the desire which reinforce specific values (Heinstron 2003). Following the decision made which is based on the information we had at our disposal; one may become aware

of alternatives, and the undesirable features from becoming aware that alternatives decision may be right and the un- comfortableness from such understanding creates tensions which have a cognitive and psychological tradition (Baker 2004). This creates further barriers to development. Similarly in the event of having to consider the views of other stakeholders in construction briefing, this may constitute barriers to overcome by the consultant project manager which are also psychological (Heinstrom 2003).

Therefore overcoming such barriers may require the consultant project manager to show confidence in his own capabilities. Confidence and conviction in the final decision as it relates to identifying the client requirements emanating from the information gathering process and more particularly that which satisfy the client. Information seeking as a cognitive and emotional process of constructing consequently invokes a personal understanding of a topic (Kuhlthau 1993). To this end the situation of the consultant project manager conducting the briefing process would suggest an emphasis on knowledge from similar project, and problem solving among other characteristics (Inwersen 1996) to which personality traits have influenced.

5.6 Personality and job features

One of the dominant paradigm in the literature on personality and job satisfaction is found in the “RIASEC” concept (meaning realistic-investigative-artistic-social-enterprising conventional) This concept provides credible evidence to suggest personality and performance linkages in the briefing process, because these cases are realistic, investigative and involve social factors aspects which are essential for the success of briefing. The foundation of RIASEC pins on the theory of stable individual and differences in preferences for job. These are influenced by characteristics and individual who are in jobs those matches these characteristics are likely to be more satisfied. This theory supports the proposition that the consultant project manager who possesses the traits for delivering an effective briefing is likely to be effective. Though

RIASEC types are fairly stable over time (Lubinski, Benbow, & Ryan, 1995), and may partially be distinct from other measures of personality, it implied a trait relationship to briefing. For example briefing involves investigation, the trait openness to experience correlates fairly strongly with investigative type ($r = .21$), similarly extraversion correlates fairly strongly with the social type ($r = .25$) (Barrick, Mount & Gupta, 2003). The relationship between personality traits and success is essential and so it makes sense that clients might well prefer certain “types” of consultant project manager based on their impressions of who will do best on the job.

5.7 Personality traits and briefing process success

Personality traits influence on performance can be measured (RIASEC theory). This relationship can be defined by correlation coefficients values. In many Meta-analyses it has been consistently demonstrated that there are consistent relationships between numerous traits and job performance across a number of jobs (Barrick and Mount 1991). Crucially, an important mechanism that leads to correlation relationship between personality and effective performance outcomes is the effect of personality on the types of jobs that individuals might acquire. These relationships can be divided broadly into the effects of personality on job preferences and the ways in which personality can lead an individual to be considered desirable by employers (Judge and Muller 2007). In other words, personality can influence what you want as well as what you can get and so when bringing previous knowledge from other projects, skill and experience, along with personal attributes it can be argued that these experiences were gained from job which suite traits preference, to which the personality theories referred. The concern is whether these precise experiences make an individual effective in the job situation. We can therefore propose that the construction project manager coming to the briefing process would be attracted because of a preference for briefing, which are said to be driven by personalities. With the focus on identifying and defining the client

requirements to satisfy the client's expectation, then the distinct personalities driving the consultant project manager will become essential for determining effectiveness of efforts and performances. This means when observing the consultant project manager the traits observed would be representative of traits which influence the briefing process. Often the literature on personality traits and individual performance, emphasise inducement as a result of specific personality construct (Pallegama et al. 2007) that results from a differentiation of performance, on the basis of preference these characteristic place them into distinct categories of personalities (Tett et al.1991; Barrick and Mount 1991).

This is significant for this research, since validated instruments provide guidance for establishing correlated relationships between traits and performances. Based on the above summation, it would seem reasonable to expect that personality factors should play an equally important and valid role in determining effective performance. Thus the goal is to look at the relationship between personality traits and the impacts on the consultant project manager performance.

5.8 The performance of the CPM- interpreting personality traits

The performance of the consultant project manager in construction briefing can also be thought of as the interaction of cognitive abilities and motivation (Yu et al. 2008; Stewart 2008) and while cognitive ability is seen as gaining knowledge through interaction with other stakeholders, with an influence on information behaviour (Stewart et al. 2008; Heinstron 2003), motivation is regarded as the direction and quantity of attention effort directed towards the tasks and the extent to which this effort is maintained over time (Stewart 2008). Generally motivation and interest can influence the way the consultant project manager interpret the client project requirements (Heinstron 2003). Therefore the consultant project manager desires to identify the client requirements effectively and satisfying the expectation of the client, includes a

level of persistence driven by the components of motivation which are likely to be influenced by the personality traits which requires investigation.

5.9 The investigation

5.9. 1 refined questions for the research

For the investigation to be plausible the research must be objectives oriented. Therefore, considering the research aims and objectives it becomes essential for traits relations and influence on performance to be analysed. The underlying issue therefore is to determine whether the performance of the consultant project manager in the briefing process can be understood and explained by personality, since the very nature of these traits makes individuals different and performs differently (Boeree 2006). In response specific research questions emerged, these research questions therefore are:

- How current day briefing practices conducted and what are the conceptions?
- What are the relationships between sixteen personality traits and effective construction briefing?
- How significant are sixteen personality traits for influencing effective briefing performance of the consultant project manager in construction briefing?
- Which are the dominant personality traits that are related to effective construction briefing?
- In terms of importance which of the personality traits are best predictors of effectiveness in the briefing process

5.10 Conclusion

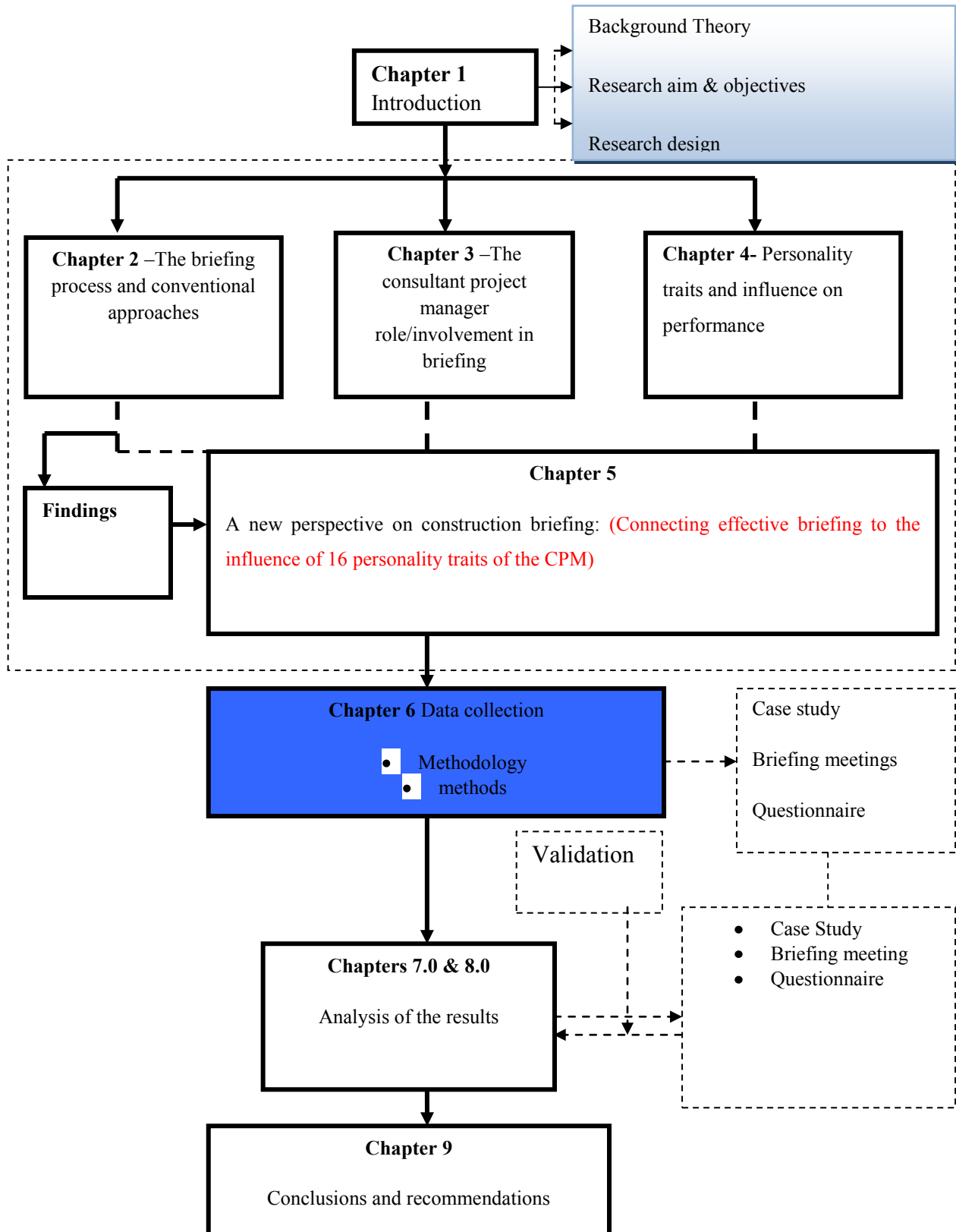
The chapter introduced a new perspective on the briefing process. Other than providing appraisals of the likely effects of personality and effective briefing performance, the study reviewed evidence of personality relationships to effective performance and sought to apply the logic to relate to effective briefing. Evidence on various aspects of the relationship between personality and effective briefing was reviewed, integrating the psychological issues. The linkage between personality and job features, as well as dispositional and situational factors that moderate the personality and effective briefing were discussed.

In understanding the nature of personality traits which impact on actions, it became clear that different aspect of the industry work would necessarily requires different traits. This influenced the research to focus on the essential traits of the consultant project manager in the briefing process; because the consultant project manager understanding the client requirements is relies on influence of personality traits.

The underlying assumptions are the big five and other trait dimensions influence the performance of the consultant project manager in construction briefing. This supposition is theorising that the consultant project manager with specific traits is ideally suited for extracting effective briefing.

The chapter concludes that identifying the personality traits which influence the actions of the consultant project manager can provide an enhanced perspective for improving the briefing process. From the personality traits perspective the practice of the consultant project manager are impacted by personality traits. As such the new perspective has been established accordingly to indicate the consultant project manager with the traits which influence effective performance is likely to perform effectively, and is likely to identify the client requirements to their satisfaction.

Chapter 6 Research Methodology and Method



6.1 Introduction

6.1.1 Scope of chapter

The preceding chapter observed the need to evaluate the influence of personality traits of the consultant project manager on performance in construction briefing. This has been proposed to improve the effectiveness of the process with greater consistency than presently.

Based on the applicability of a number of personality evaluation techniques (Goldberg 1999) and on the basis of the research aims and objectives it was necessary to propose a rigorous and robust methodological framework for identifying the precise and enabling personality traits of the consultant project manager which influence performance in the briefing process. The framework therefore would have to enable identifying specific personality traits that are relevant for defining the consultant project manager performance so that the relationship between these traits and the performance of the consultant project manager could be analysed.

This chapter therefore introduces the approach used in the proposal. It reviewed the literature on generic research strategies to justify the approach taken in the study. A methodology based on the socially constructed knowledge claims associated with the qualitative approach deemed conducive to the research investigation is identified as appropriate. Further, it considers the strategies of phenomenology, ethnography and case study associated with the qualitative approach suited for the research.

Researchers wrote about the significance of adopting the correct method for collecting data for answering research questions (Punch, 2006; Creswell, 2003), as a consequence the importance of the techniques adopted within the qualitative paradigm is identified, and incorporated in a detailed strategy for the survey to fulfil the research objectives. Administration of the fieldwork through case studies and a survey approach is also discussed. Specifically the technique of direct observation (for identifying the

personality traits of the consultant project manager during the briefing execution phase), and for rating traits based on a subjective assessment of the influence on performance, in the case studies, and a country wide postal questionnaire survey respectively, are identified as the appropriate approach for the thesis proposal. In the questionnaire survey respondents were asked to self-rate themselves by indicating the traits which they believed influence their performance in the briefing process. They were also required to score the trait(s) to indicate the degree of influence.

These requirements (mentioned above) are part of the social sciences strategies; as such the various research claims and strategies available to the social sciences were reviewed to identify the philosophical position of the research as being within the interpretive paradigm. This was necessary to make explicit the paradigm that guides the development of the research strategy. The significant issues relating to generic research approaches were evaluated to give an overview of the strengths and weaknesses of the strategies in application. In doing so it makes explicit the strategy that adequately responds to the research questions. In light of the interpretative paradigm, a naturalistic inquiry approach was introduced to indicate meaning in the natural environment for the research.

6.1.2 Outlining the problem

The preceding chapters (2, 3 & 4) reviewed the relevant literature to focus on the influence of the consultant project manager personality traits on performance in briefing. Based on the findings (section 5.1.1) the briefing process is critical for project success but there are many limitations with current practices. A criticism relevant to this research is the weakness in the process can be attributed to the consultant project manager performance. This often refers to the failure to identify the client requirements on a consistent basis, and often leaves clients dissatisfied with briefing outcomes.

Boeree (2006) noted variations in performances are due in part to individual differences owing to personality traits influence, and this finding explains the likely cause of differences in performance among consultant project managers.

Because it is established that performance levels among consultant project manager often varies (chapter 3) it has become the main focus of the study for evaluation. On the basis of the problems identified it became necessary to focus on finding a solution by adopting a direct method of approach to evaluate performance issues. It therefore became essential for the research strategy to allow an enabling approach that responds to the research objectives which are prompted by the need to respond to the following issues:

- Identify current day conventional briefing approaches.
- Identify the personality traits of the consultant project manager and determine their influence on performance in the briefing process.
- Highlight the extents to which specific personality traits construct of the consultant project manager influence the effective briefing process.
- Determining the relationship between personality traits and performance in construction briefing.

Further on the basis that the primary goal of this research is to evaluate the influence of personality traits on the effectiveness of the briefing process, then a suitable research approach must be selected to provide an enabling environment for correctly assessing traits and influence on performance. Taken that the personality literature contends that the way an individual behave, feel and think can only be understood if there is an understanding of the situation in which the individual is operating, it becomes inevitably that evidence must be garnered to support the individual's actions, and this is important. As a consequence reviewing the various strategies is essential to allow for such evaluation.

6.2 The potential research strategies

To identify the personality traits of the consultant project manager can be challenging because it has to be accomplished through observation in a natural setting, where the subject is of an interpretative and subjective nature. Selecting the correct strategy therefore helps to minimise these challenges. This section therefore investigates the various research strategies with the aim of selecting the strategies best suited to achieve the research aims and objectives. Having established this position, it is essential to remember research strategies are designed to question the research objectives (Naoum 2004). There are basically three strategic approaches frequently used in the social science. These are, for example, quantitative, qualitative and the mixed method research. The choice (of one) is guided by the consideration of several factors, such as the purpose of the research, the philosophy of the research, the strategy of inquiry and methods. However, though these factors may have a place and are essential, it is the research problem, objectives, personal experience as a conglomerate, the audience(s) for whom the report will be written, and the consequences therein, that ultimately determine the choice (Creswell 2000). The three main strategies are therefore explained further in the next section.

6.2.1 The quantitative research approach

The quantitative research is broadly objective in nature (Naoum 2004). It tends to take a positivist stand and seeks to acquire factual data based on the assumption that social reality has an objective ontological structure where individuals are responding agents to this objective environment (Fellows and Liu 2003). This strategy is best applied when you want to seek out facts about a concept. In this approach, facts and their relationships are studied, leading to conclusions as to how the facts and their relationships support, or fail to support existing knowledge. Further, the data collected is generally not abstract and are normally based on hard and reliable facts which are

measurable and can facilitate counting. Hence the data is in a quantifiable form. Analysis of such data generally provides some quantifiable results which will form the basis of evaluation within the context of existing knowledge. Naoum (2004) contend quantitative research is a strategy that emphasises quantification in both the collection and analysis of data, where the positivism influence or the norms of the natural scientific model, coupled with the view of objective social reality are also incorporated. Essentially, there is usually a distinction between the subject being investigated and the researcher, and this implies that the researcher is at a distance and tries not to influence the subject by being unbiased.

In general with quantitative strategies a critical review of the literature is required prior to data collection to contextualise the theories or phenomena to be investigated within existing knowledge claims. Basically the essence of the quantitative paradigm is measurement which is reliable, valid and clear in its cause and effects (Cassell and Symon, 1994).

6.2.2 The qualitative research approach

The qualitative research on the contrary shares the theoretical assumptions of the interpretative paradigm. This is more susceptible to interpretation from observation and emphasises meanings (Walker 1997). According to Fellows and Liu (2003), the focus of the qualitative approach is on understanding of people's perceptions of the world. Unlike quantitative approach where the focus is on the investigation of facts, qualitative approaches seek people's views, beliefs, opinions and understanding. Hence this approach is subjective in nature since because it emphasises meanings, experiences and descriptions. Creswell (2000) noted that the qualitative research strategy usually stresses words in data collection and analysis. It generally entails an inductive approach which leads to theory building. It recognises and stresses differences that may exist in the way individuals treat and interpret their constantly changing world. Such an approach can be

seen clearly in a typical interview (qualitative) conversation. It attempts to understand the real world from the perspective of the subjects, and seeks to understand and attach meaning to the experience of the subjects within the real world, leading to scientific theories (Kumar 1996). On the basis of the characteristics features of this study, this conclusion emphasises the suitability of the qualitative nature to his study, based on observation and interpretation.

On these assumptions the qualitative research (generally) is more likely to focus on the understanding of meaning of some phenomena within the natural setting of the phenomena (Lincoln & Guba, 1985), suggesting the focus of the topic is more on everyday activity, including identifying an appropriate setting where the study will be conducted. This clearly requires a deep knowledge of the setting and how it relates with the subjects.

6.2.3 The mixed research approach

Importantly, the mixed approach is a combination of both approaches (qualitative and quantitative). Johnson and Onwuegbuzie (2004) defined the mixed methods as “the category of research where the researcher combines quantitative and qualitative research strategies, techniques, and concepts into one study”. Because both quantitative and qualitative research approaches seek to explain certain phenomena, it is argued that both could be used within a methodological process (Fellows and Liu 2003). The question is, why not adopt a mixed approach since combining the two approaches will mean benefiting from their collective strengths immediately? Further, Johnson and Onwuegbuzie (2004) noted that strengths of one approach can be applied to strengthen the other, and in a mixed approach this can provide stronger evidence through bringing together the two approaches. However Bryman and Bell (2003) noted that the case against the mixed approach lies in the fact that it is mainly premised on the idea that the two approaches are separate paradigms with their own epistemological strengths.

There will be arguments for and against a particular strategy over the other (Kumar 1999). However, though arguments may differ about concepts, each research paradigms have their place and serve their specific purpose. Further the debates at times can shift to qualitative versus quantitative inquiry. For example, which might be the best and which is more “scientific (Kumar 1999). However, the general opinion is that all approaches, methodologies and empirical approaches have their specific strengths and weakness. No one method is superior to the other. They all serve their specific purpose, for example; qualitative research appears invaluable for the exploration of subjective experiences of patients and nurses, quantitative methods facilitate the discovery of quantifiable information. These virtues are made explicit in considering the strengths and weaknesses of the various strategies and are explained below:

6.2.4 Strengths and weaknesses of the research approaches

The strengths and weaknesses were referred to and the distinctions among the various research approaches were discussed. However, based on the suggestions that the choice will be based on appropriateness for the research questions when the goals of the research are considered, the strength and weakness of each strategy is discussed to make explicit the context and practical considerations.

6.2.5 Quantitative research

The strength of the quantitative approach resonates in the ability to generalise the findings when replicated on different populations (Johnson and Onwuegbuzie 2004). The results are relatively independent of the researcher, thereby reducing the tendency for the results to be influenced by the researcher’s bias. However some of the identified weaknesses relate to the gap that may exist between the researcher’s theories and the way these are reflected in the local setting. The approach is therefore not very suitable

for understanding peoples' perceptions, views, and understanding. In addition, research results may be too general for practical application on a specific context.

6.2.6 Qualitative research

The strength of the qualitative approach lies in its usefulness in studying a limited number of cases in depth. It is also useful for describing complex phenomena and for studying dynamic processes, and because data collection is normally carried out within the natural setting of the subjects, qualitative approach facilitates understanding of concepts as they exist within the local context. The weaknesses however relate to the difficulty to generalise the findings. The concern here is that results obtained by one researcher may not be reproducible by another, giving rise to questions of reliability of the findings. Similarly, in comparison with quantitative research, data collection and analysis is relatively more time consuming, and further, it is easier for the researcher to influence the results (Johnson and Onwuegbuzie, 2004).

6.2.7 Mixed research

Johnson and Onwuegbuzie (2004) defined mixed methods as "the class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study". Because both quantitative and qualitative research approaches seek to explain certain phenomena, Fellows and Liu (2003) argued that both could be used within a methodological process. So, why adopt a mixed approach? The feeling that combining the two approaches will mean benefiting from their collective strengths immediately comes to mind. Johnson and Onwuegbuzie (2004) noted that strengths of one approach can be employed to enhance the weaknesses of the other. Furthermore, a mixed approach can provide stronger evidence through convergence of findings from the two

approaches. However, Bryman and Bell (2003) noted that since there are arguments against the mixed approach, which are mainly hinged on the idea that the two approaches are separate paradigms with their own epistemological stands, then the strengths of the mixed approach are clear. This approach could be expensive, more time consuming, and more difficult for a single researcher to conduct (Johnson and Onwuegbuzie (2004). There is also the difficulty of addressing the issue of how quantitative data can be qualitatively evaluated.

In light of the above conclusions it is therefore essential to identify the correct strategy to answer the research questions while responding to the research objectives. It's suggesting considerations should be given to the knowledge claims and the psychological position of the research. In the context of this research therefore the key issues to guide the process were influenced by the following:

- The need to conduct the evaluation in an enabling environment (natural setting) to identify the personality traits of the consultant project manager.
- To be able to understand the relationship between traits and briefing outcomes to establish the premise for conducting more detailed work in the future.
- The need to understand the extent to which personality traits influence performance of the consultant project manager , while ensuring that the research scope remains sufficiently broad so that all issues related to the briefing process and personality influence is identified at the preliminary stage of the research study.
- The need to produce a sufficiently rigorous prediction of the influence of personality traits of the consultant project manager on performance in briefing to justify further, detailed work, should the prediction suggest that personality traits are significantly influential.

- The need to identify the appropriate and advantageous techniques that will allow for all of the above objectives.

Accordingly, the questions that were considered to assist in framing the strategy to achieve the aims and objectives exemplified in the refined questions (section 5.9.1) were:

- How suitable would it be to observe the consultant project manager briefing practice to give an accurate account of performance?
- How easy would it be to identify the personality traits which influence performance?
- How simple would it be to determine the influencing of personality on the consultant project manager performance in construction briefing and the extent of the influence?
- How easy would it be to determine whether the identification process would allow the data to be statistically analysed to determine the relationships between personality traits of the consultant project manager and effective briefing performance?
- How simple would it be to differentiate the personality traits which are the best predictor of effectiveness in briefing?

The questions call for a specific philosophical stands which are explained in the next section.

6.2.8 The philosophical position of the research

The differences between (and among) the various approaches are exemplified by their strengths and weaknesses which underpins the philosophical position of the approach and specific knowledge claims (Krauss 2005). The philosophical position

stands on a epistemological pillar of knowledge to suggest how we come to know what we know (Trochim 2000) and this is intimately related to ontology and methodology. Since ontology involves the philosophy of reality, and epistemology addresses how we come to know that reality, then the methodological approach is identified with a particular practice used to attain the knowledge of it. As such the philosophical assumptions about the nature of reality are essential for understanding the overall perspective from which the study is designed and carried out (Krauss 2005). Krauss (2005) contended many qualitative researchers operate in different epistemological assumptions, to suggest the best way to understand any phenomenon is to view it in its context. Considering this stand the various modes of the research are covered by the research strategy, for example, the mode (claims) of research (rather than research method) required to fulfil the research strategy or whether the research method of inquiry should adopt either of the following methods; an inductive or a deductive approach, positivism or structuralism, social constructivism or interpretative. These are briefly explained, beginning with the examination of the inductive method. The inductive method of research makes formulation of a generalisation from a number of observations or instances (Creswell, 2000). The observation is made first and from this an understanding of a phenomenon or principle is inferred. The deductive approach is founded in principles which define a series of logical statements where the last is the conclusion of the sequence. Each statement in the sequence must be an axiom (in this context an established principle or fact) and the final sentence is a theorem or logical deduction. It first proposes or hypothesises principles before attempting to validate them by observing and confirming their presence in established practices or testing their practicality through experimentation.

The positivism context is considered on the basis that the situation in which the researcher find himself (herself) stands apart from the research problem and facilitates its solution through the use of established objectives measures uninfluenced by the researcher. Easterby-Smith, et al. (1999) contend the researcher must be truly independent of what is being observed, so that the choice of what to study and how to

study, is determined by criteria rather than by human beliefs and interest. The French philosopher August Comte noted all good intellects have repeated beliefs to suggest that since Bacon's time, there can be no real knowledge but that which is based on structured observed facts.

Structuralism is concerned with a scientific model of language which is composed of a closed system of words relating to sounds, drawings and rules which attempt to represent fact precisely and negating ambiguity (Audi, 1999). This concept is now widely debated for context since it appears to be analogous to positivism.

The social constructivism approach assumes that the world and our knowledge of it are interpreted through social practices and institutions (Audi 1999). The end product therefore is a filtered element which shows their relevance within a particular social context. This is not just a matter of measuring but also understanding the constructs of people and their experience of the subject under interrogation. Easter by-Smith et al (1999) contends social constructivism is the opposite end of a continuum to positivism.

Essentially the interpretative paradigm is concerned with understanding the circumstances of a situation in a natural setting and to understand the fundamental nature of the subjective experience. This requires taking interest in what is taking place within the realm of individual consciousness and subjectivity.

Given the underlying assumptions of these principles it was apparent the interpretative paradigm which embodied most qualitative strategy would better contribute to achieving the aims and objective of the research, because the study is concerned with exploring and understanding the consultant project manager briefing approach. This is not to say there are not qualitative elements, for example there are many instances in the briefing process where quantitative data is evident, for example, in describing the environment where the briefing process takes place, including setting out of the technical and economic feasibility, even though these descriptions are

generally hard to define in nature. However these instances where the quantitative dimensions are evident, will serve to complement the qualitative data, thereby providing insights into the industry attitudes and opinions regarding the research proposal. This would help to define the softer issues associated with the research proposals by enabling an understanding of the environment where construction briefing practice takes place and develops. Broadly, the research method selection would be related to the importance of the research elements (aim and objectives) (fig 6.1).

Table 6.1 Quantitative, Qualitative, and Mixed Methods procedures		
Quantitative Research Methods	Qualitative Research Methods	Mixed methods Research Methods
<p>Predetermined instruments based questions</p> <p>Performance data attitude data, observational data, and census data</p> <p>Statistical analysis</p>	<p>Emerging methods</p> <p>Open-ended questions</p> <p>Interview data, observation data, document data, and audio-visual data</p> <p>Text and image analysis</p>	<p>Both predetermined and emerging methods</p> <p>Both open-and closed-ended questions</p> <p>Multiple forms of data drawing on all possibilities</p> <p>Statistical and text analysis</p>
<i>Adapted from Creswell, 2000</i>		

Burrell and Morgan (1979) on research philosophy contended that all

approaches in the social sciences are subjected to explicit or implicit assumptions about the nature of the social world, and the way the world may be investigated. Guba (1990) used the term 'paradigm', to define 'a basic set of beliefs', and brings into perspective the epistemological and methodological assumptions, to suggest how the researcher sees the world and how it should be understood and studied. They contended that these issues are best answered by responding to the following questions (Burrell and Morgan, 1979; Guba, 1990).

- Epistemological question: What is the nature of the relationship between the knower (the inquirer) and the known (or knowable)?
- Methodological question: How should the inquirer go about finding out knowledge?
- Human nature question: What is the relationship between human beings and their environment?

These questions highlight the interrelated levels of decisions that go into the process of designing research, the various links (philosophical) which exists in the social science (Creswell 2000; Burrell and Morgan 1979) and whether they satisfy the 'subjectivist and objectivist elements of the research. The conclusion is, research approaches in the social science can be characterised as lying between two extreme standpoints. For example, if the researcher treats the social issues as subjective reality or objective reality? These issues would suggest whether the research methodology would focus on identifying causal relationships. The aim would be to search for relationships that explain and govern the reality of the situation being observed, which concerns the way in which the events are observed and interpreted.

These considerations were extended to the nature of society itself to suggest a typology of the sociological paradigms (Kao 2004; Burrell and Morgan 1979) as such the dimension of the sociology of regulation to the sociology of radical change was

introduced. This is primarily concerned with the need for regulation in human affairs, premised on the explanation of why individual communities generally hold together rather than fall apart. As a consequence four sociological paradigms which provide a basis for explaining this premise are identified in fig 6.1. These are: 'functionalist', 'interpretive', 'radical humanist', 'radical structuralist'.

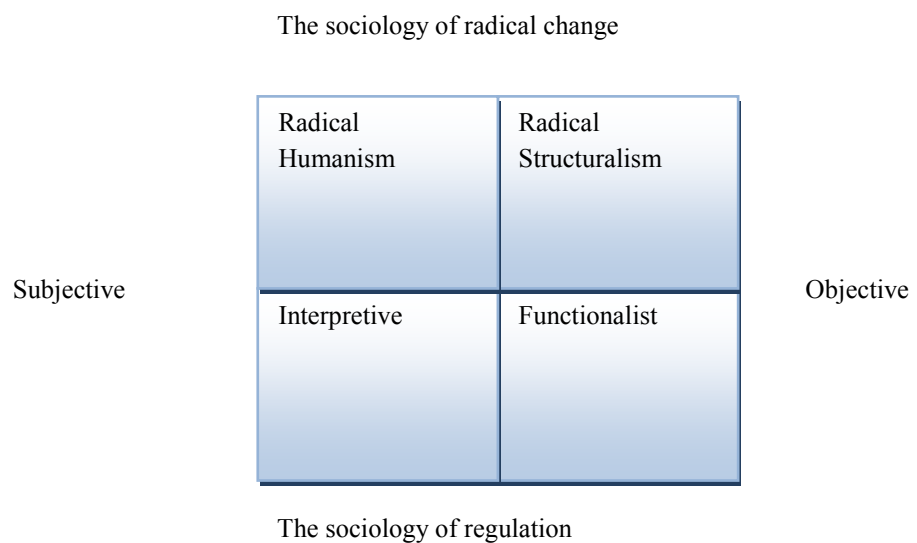


Fig 6.1 A typology of sociological paradigm

(Adapted from Burrell and Morgan, 1979)

The social theories can be located within these four paradigms (Burrell and Morgan 1979). These four sociological paradigms do not only define fundamentally four distinct perspectives for the analysis of social phenomena, but also provide a tool for locating one's own research position of social theory and approach to the research subject area (Kao, 2004).

The Subjective- Objective Dimension

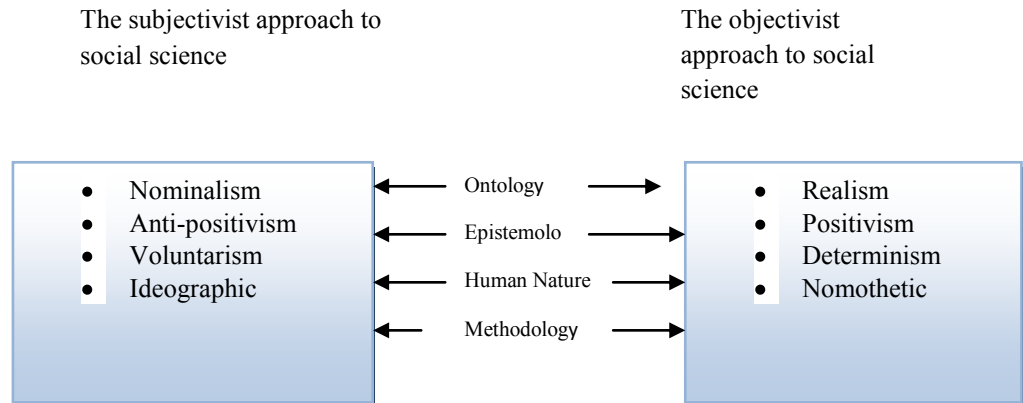


Fig 6.2 A scheme for analysing assumptions about the nature of social science.
(Adapted from Burrell and Morgan, 1979)

In light of these assessments the philosophical position of this research lies within the interpretative paradigm. This is adopting a 'subjectivist' approach to analyse the social and natural phenomena. The interpretative paradigm is defined briefly as follows:

“The interpretive paradigm is informed by a concern to understand the circumstances of a situation in a natural setting, to understand the fundamental nature of the subjective experience. The desire is to understand what is taking place within the realm of individual consciousness and subjectivity, within the frame of reference of the participant” (Kao 2004 citing Burrell and Morgan 1979)

It is strongly suggested that research located within the interpretative paradigm attempts to dig deep into the depths of human subjectivity for an understanding of the fundamental meanings that underlie the issue and is suited to construction management research (Burrell and Morgan, 1979). Considering that the briefing process is carried out by people who are so often engaged in 'concerted social action', there is a very

strong case for the research to adapt to the interpretive paradigm. Simply, because the interpretive paradigm is concerned primarily with meaning and also provides a basis for interpreting the actions of the consultant project manager in the briefing process (Seymour et al. 1997).

6.2.9 The naturalistic inquiry

Philosophically the naturalist inquiry is recognised from a contrasting and challenging position about the critiques of positivistic approach to research (Kao 2004). Lincoln and Guba (1990) propose 'naturalistic inquiry' in contrast to the positivistic approach to social inquiry to suggest naturalistic setting is relevant (Lincoln and Guba 1990). The definition of these various setting provides many insights of relevance, for example: The natural setting is carried out, for example, in the field where the study is proposed and suggests:

- The human instrument is conceived as the primary data-gathering instruments.
- The samples are purposeful. Purposeful samples are preferred in order to increase the scope of the data exposed.
- Case study: Research to be reported as a case study because of its adaptability and suitability for observing and identifying the traits descriptions.

The summation of the naturalistic inquiry appears to be on the same philosophical assumptions with the interpretive paradigm, since both have the same beliefs about the approach to the research. Similarly, the characteristics of the naturalistic inquiry provide the methodological considerations to indicate how the research should be conducted in a qualitative environment.

Based on these considerations, and the principles of naturalistic inquiry as a

linking strategy to connect the interpretive paradigm of the research, the qualitative research strategy is selected as the appropriate approach, because the characteristics of the briefing process (inquiry) lie within the realm of the qualitative strategy.

6.3 Choosing the qualitative research method

It is established that the qualitative research is grounded in the same philosophical assumptions as the interpretive, naturalistic approach which are based on the understanding of meaning of some phenomena ((Burrell and Morgan, 1979; Kao, 2004). Clearly, what is required is deep knowledge of the setting and how it relates to the subject of the research.

Further, Maxwell (1996) suggests qualitative research is (also) suited for five research purposes, for example:

- Understanding the meaning of the events, situations and actions the participants are involved with and of the accounts that they give of their lives and experiences
- Understanding the particular context within which the participants act, and the influence that this context has on their actions
- Identifying unanticipated phenomena and influence, and generating new grounded theories about the latter
- Understanding the process by which events and actions take place
- Developing causal explanations

These suggestions are important for achieving the research aims and objectives and bring the current research even closer to, or falls more in line with the qualitative arguments, since to identify and evaluate personality traits requires an understanding of

the process. In addition the aim of this study calls for gathering statistically useful information. These considerations further confirm that the most suitable strategy is the qualitative research, because (once more it is shown) it shares the theoretical assumptions of the interpretative paradigm of the research.

6.3.1 Research strategies of inquiry

Creswell (2003) contend that researchers generally bring to the choice of a research strategy (design) assumptions about knowledge claims. Strategies multiply all the time and strategies of enquiry contribute to the overall research approach(strengths and weaknesses) for interpreting meanings. In the qualitative paradigms, the strategies which are associated with this approach are Ethnographies, Grounded theory, Case studies, Phenomenological research, and Narrative research, which are further explained below.

- Ethnographic research strategy is suitable in situation where the researcher is observing human actions, behaviours, values and established principles. Ethnographic research is mainly observational and is founded on the principles of the social sciences where relationship between different people or group of people is studied. To facilitate accurate observation, the researcher becomes integrated into the organisation to observe the work processes without influencing them.
- Grounded theory strategies is suitable in situations where the researchers attempts to derive a general, abstract theory of a process, action, or interaction grounded in the views of participants in a study. This process involves using multiple stages of data collection and the refinement and interrelationship of categories of information (Creswell, 2000). Two primary characteristics of this design are the constant comparison of data with the

emerging categories and the theoretical sampling of different groups to maximise the similarities and the differences of information.

- The case studies approach is suitable where the researcher wishes to explore in depth a program, an event, an activity, a process, or one or more individuals. Case studies are bound by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time (Creswell 1998).
- Phenomenology research is suited in situation where the researcher seeks to identify the “essence” of human experiences concerning a phenomenon, as described by participants in a study. Understanding the “lived experiences” marks phenomenology as a philosophy as well as a method, and the procedure involves studying a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning (Creswell, 2000). In this process, the researcher “brackets” his or her own experiences in order to understand those of the participants in the study (Creswell 2003). The phenomenology concept was considered on the basis that it is the observation or description of any event that can be explained in precise terms. The complex phenomena will require breaking down into their component parts until it can be precisely defined. Audi (1999) describes phenomenology as “....a clearly delineated body of doctrines whose essential characteristics can be expressed as a set of well-chosen statements”
- Narrative research is suitable for form of inquiry where the researcher studies the lives of individuals to provide stories about their lives. The information garnered is then presented into a narrative chronology. In the end, the representation reflects the views from the participant’s life with those of the researcher’s life in a collaborative narrative (Creswell 1998).

From a research design perspective, the current research is characterised as exploratory, because it seeks to investigate the theoretical basis of the briefing process in order to offer new insights into traits and performance relationships in the briefing process. The specifically relates to evaluating the influence of personality traits of the consultant project manager on his (her) performance in the briefing process. This involves observations and identifying the personality traits of the consultant project manager which are perceived to be related to performance; as such the outcome depends on a subjective assessment of the observer which is an interpretive process.

A strategy therefore most suitable for achieving these objectives is therefore deemed necessary. It was therefore necessary to consider the appropriateness, advantages and disadvantages of each strategy in order to arrive at an appropriate strategy in keeping with the research specific aims and objectives. The strategies were assessed for suitability. Having evaluated the five key strategies it was difficult to choose one owing to strength and applicability criteria. On a prima-facie it appeared each could be implemented to fulfil the data collection process with the available resources. For example, the grounded theory in particular was a strong option which would have supported the research if the research questions and objectives could have been better understood when grounded in a theoretical framework, likewise if the author was undertaking an in-depth analysis to derive a general or abstract theory, action, or interaction grounded in the views of participants, but since the author was focussing on exploring the briefing process to observe current practice and identify the personality traits which influence the consultant project manager performance, grounded theory as the options was ruled out. The narrative research approach was also strong when the benefits and disadvantages were evaluated. But because this is generally suitable for inquiry of the lives of individuals, and since the authors was focussing on the essence of experience in a natural setting, the narrative research option was also ruled out as a suitable option, (because in the author's view the narrative approach would not have satisfied the research purpose), and so from the initial evaluation process and considering the research objectives the strategies of ethnographies, case study and

phenomenological were considered relevant and the reasons are further discussed below.

6.3.2 Selection of the research strategy of inquiry

Following the conclusions (6.3.1) it became apparent that since the purpose of the research was clear in print and the aims and objectives were well defined, then the strategies of ethnographic, case study and phenomenology associated with the qualitative research approach were appropriate to satisfy the research aims and objectives (Chapter 1).

These strategies provide the methodological principles to specify the research methods for collecting and analysing the empirical materials. The justification of each in terms of the benefits derived to the qualitative approach and the study as a whole is explained as follows:

The strategy of case study allows for a direct view of the situation in natural settings to the extent that the personality traits which influence the actions of the consultant project manager carrying out the various briefing activities can be evaluated. It allows for key areas regarding the research questions to be evaluated to ensure the briefing projects meets the criteria of the study. Because the activities are generally conducted in workshop settings, data collection in the form of traits identification is facilitated, which allows a true understanding of the relationship between traits and performance.

The strategy of phenomenological on the other hand is about a researching in situations where there is the need to understand live experiences. Emphasis is fixed on achieving a good understanding of the issues, through direct observation to experience the phenomenon in real time (Yin 2003; Creswell 1998).

The ethnographic research is mainly observational, where human actions are observed and is founded on the principles of the social sciences. Particularly this is suited because there is the need to establish relationships and to assign meaning to situation. The premise of the study is also based on interpretation and putting meaning to traits impact or influence. This is a good strategy for achieving the research aims and objectives.

Table 6.2 Strategies of qualitative research		
	Phenomenological study	Case Study
Focus	Understanding the essence of experiences about a phenomenon or a concept	Developing an in-depth analysis of a single or multiple case
Discipline origin	Philosophy, Sociology, Psychology	Political Science, Sociology, Evaluation
Data collection	Long interviews with up to 10 people	Multiple sources: documents, archival records, interviews, observations , physical artefacts
Data analysis	Statement, Meaning, Meaning Themes, general description of the experience	Description, Themes, Assertions
Narrative form	Description of the essence of the experience	In-depth study of a case or cases
<i>Adapted from Creswell (1998)</i>		

6.3.3 The data collection technique to support the strategy

There are many approaches for collecting research data. This can be from a primary source in the form of observations, conducting interviews (structured and unstructured) and postal questionnaires or from a secondary source in the form of documents, records and historical data (Naoum 2004). Wing, Raftery and Walker (1998) contended that the choice of an approach in the field of construction management depends on the nature of the problem and the data required. They argue that the choice should be pragmatic, leaning towards one that is likely to contribute to collecting the data that contributes to generating practical solutions to the research problem. Because the aim of the research is to evaluate the influence of traits on performance, emphasis was placed on the natural setting. Survey methods such as the case study and questionnaire are practical in such instances and therefore considered essential for the study. They are explained below;

The questionnaire survey (in particular) is a widely used technique in surveys to find out facts, opinions and views on what is happening and to get the facts from a wider cross section (Naoum 2004). It is a good way of gathering facts, opinions or individual views and generally will supplement the case study data. Generally the questions are closed natured, requiring a yes/no response or by ranking factors in terms of degree of agreements or importance.

Importantly Robson (1993) noted that whatever the form taken, the crucial issue of response rate must be addressed. The questionnaire survey is usually preferred where data collection involves construction companies because of their geographical dispersion. It is also a good way of collecting data quickly and relatively cheaply, whilst allowing the respondent the freedom and frankness to respond without being identified (Robson 1993). The validity of the results is generally high and acceptable because of the wide geographic location covered (Naoum 2004).

It is worth noting though, that questionnaire surveys have their limitations. Some of

these limitations include a lack of depth on the information sought, and the researcher's inability to confirm respondent understanding of the concepts used in the questionnaire.

Similarly there is a lack of opportunity for direct feedback it is, highly labour intensive from the respondent perspective, and at times the generally low response rate (Fellows et al 1997). It is the general view that the low response represents a common trend (Kamara et al. 2001).

Root and Blismas (2003) proposed a number of suggestions to improve response rates from questionnaire surveys. They concluded that they were able to achieve high response rates by adhering to the suggestions, even though it took some respondents about 40 minutes to fill in the questionnaires. These suggestions include structuring the questionnaire to incorporate closed questions if convenient, including a comprehensive cover letter to accompany the questionnaire, and the use of freepost return envelopes to minimise excuses for not responding. Also the response rate could be improved by promising anonymity of replies, using a follow-up letter, and by promising a summary of results (Waters, 1997). These recommendations were adopted in order to facilitate response rate.

On the basis of these recommendations the majority of questions in the questionnaire (see Appendix B) were designed to be of the closed nature. Questionnaires were administered by post with a covering letter (Appendix A) and an addressed return envelope enclosed.

Regarding the case study it is generally employed in situation where there is the need to contribute to knowledge of social phenomena and commonly applied in social research (Gillham 2000). This method allows investigators to retain the holistic and meaningful characteristics of real-life events.

A key strength is the ability to employ using multiple sources and techniques in the data

gathering process. The researcher determines in advance what evidence to gather and what analysis techniques to use with the data to answer the research questions. Tools to collect data can include documentation, archival records, interview direct observation, participant-observation and physical artefacts (Yin 1998) (Fig 6.3), and each source has its advantages. Though the six sources of evidence, individually, have its strength, on the basis of the research objectives, the direct observation approach was used as the option, since it supports observing in natural settings, and allowing semi-structured interviews to be conducted. The author has the opportunity to clarify issues of relevance to the research.

Table 6.3 Six sources of evidence: strength and weaknesses		
Source of Evidence	Strengths	Weaknesses
Documentation	<ul style="list-style-type: none"> • Stable- can be reviewed repeatedly • Unobtrusive-not created as a result of the case study • Exact-contains exact names, references, and details of an event • Broad coverage-long span of time, many events, and many settings 	<ul style="list-style-type: none"> • retrievability-can be low • biased selectivity, if collection is incomplete • reporting bias- reflect (unknown) bias of author • access-may be deliberately blocked
Archival Records	<ul style="list-style-type: none"> • [Same as above for documentation] • Precise and quantitative 	<ul style="list-style-type: none"> • [Same as above for documentation] • Accessibility due to privacy reasons
Interview	<ul style="list-style-type: none"> • Targeted-focuses directly on case study topic • Insightful-provides perceived casual inferences 	<ul style="list-style-type: none"> • Bias due to poorly constructed questions • Response bias • Inaccuracies due to poor recall • Reflexivity-interviewee gives what interviewer wants to hear
Direct Observation	<ul style="list-style-type: none"> • Reality-covers events in real time 	<ul style="list-style-type: none"> • Time consuming • Selectivity-unless broad

	<ul style="list-style-type: none"> Contextual-covers context of event 	<ul style="list-style-type: none"> coverage Reflexivity-event may proceed differently because it is being observed Cost-hours needed by human observers
Participant Observation	<ul style="list-style-type: none"> [Same as above for direct observation] Insightful into interpersonal behaviour and motives 	<ul style="list-style-type: none"> [Same as above for direct observations] bias due to investigator's manipulation of events
Physical Artefacts	<ul style="list-style-type: none"> insightful into cultural features insightful into technical operations 	<ul style="list-style-type: none"> selectivity availability
<i>Adopted form Yin (2003)</i>		

6.3.4 The technique of direct observation- the lay person and expert approach

Ashton (1998) contends a good method in direct observation (investigating personality structure) would be to use a person centred in the operation to observe the worker in a natural setting and to identify a set of basic personality traits or types which are evident in his performance. This approach is meant not to compete with but to complement other work by identifying the most frequently occurring traits in performance activities.

Given the significance of personality traits and looking for configuration variables from within, the capability of the direct approach provides a strong basis for delineating the domain of personality investigation (Mervielde & Asendorpf 2000). This is a useful starting point for trait selection in person-centred investigations.

The general criticism though is, there may be misinterpretation of the nature of the traits factor and structures obtained from observing and lexical describing personality. If one

views these structures as representing ‘the layperson’s intuitive taxonomy (Cervone, 1991), then one might criticise the lexical approach on the basis that the obtained dimensions do not represent personality trait structure, but merely people’s intuitive ideas about personality structure. However, lexical studies of personality structure do not ask respondents to provide their own intuitive suggestions about the number and substantive content of the major dimensions of personality (Ashton et al, 2005), but rather to identify the personality trait from an inventory which fit the person being observed in action.

The lexical approach is also criticized on the grounds that many of the adjectives that people use to describe personality are ambiguous in their meaning, and that these ambiguities undermine their usefulness as descriptors of specific constructs (Block, 2000). Ashton (1998) response to such concern is, ambiguity of some personality-descriptive adjectives is obvious, but this does not undermine the lexical approach to personality structure. Even if a given adjectives used in two or more different senses, such that self- or peer ratings on that adjective may reflect variance in two or more personality dimensions, this would merely result in a somewhat complex loading pattern for that adjective. The number of obtained dimensions would not change as a result of the presence of some adjectives that possess dual meanings, and those dimensions would still be readily interpretable by means of examining the common content of the adjectives defining the given criteria or factor. Certainly, the dual meanings of some adjectives have not prevented the consistent identification of coherent factors in previous lexical studies of personality structure definition in various languages.

Another criticism of the lexical structure of personality trait is that it is sometimes criticized on the basis that the variables from which factors are derived are simply those used by lay people, rather than those selected by experts and that personality experts would be better able to select a set of important variables to be factor-analysed (Block 2000). In response the lexical approach to the study of

personality structure usually involves the selection of personality-descriptive adjectives from the dictionary which match specific action and therefore put a meaning to the action. One could ask an expert to nominate a set of personality variables to be factor-analysed in search of the major dimensions of traits, but this strategy suffers from the drawback that experts may select variables in such a way that certain aspects of the personality domain are over- or under-represented, leading to a distorted factor-analytic result.

For example, industrial/organizational experts might select a set of variables that would over-represent characteristics having relevance to the workplace, and under-represent those that do not. Personality psychologists might also produce an unrepresentative variable set, with each researcher selecting a set of variables that will produce his or her favourite factor structure. In principle, one could use a strategy parallel to that of the lexical approach in order to select variables from the constructs used by personality experts. This approach would be simply to identify the personality constructs that are most widely assessed in Lexical approach to personality structure psychological research, and then to factor-analyse this large set of expert characteristics, with the expectation that all of the major dimensions should be represented in this variable set. However, such an approach would rest on the assumption that the biases inherent in the selection of personality variables by different experts will ‘cancel out’ to produce a roughly representative sample of personality characteristics. It is not at all clear, though, that the under-representation of certain characteristics by some researchers will be balanced by an over-representation of those same characteristics by other researchers (Ashton et al. 2005).

6.3.5 The technique of direct observation- concerns about the lay person approach

There have been concerns about the use of untrained or non-trained (the lay person) personnel to observe individuals for identifying personality traits. The general

criticism is directed at the selection of observers who rates the individual personality. It is argued that the lay persons who are usually undergraduate university students, who make self- or peer ratings on familiar personality-descriptive adjectives do not understand people or the causes of personality variation as well as experts, do. More so, the ratings made by these people do not necessarily reflect personality, but rather the 'conscious self-concept' which may be subject to biases, whereas expert observers of personality would provide more accurate ratings that would generate an alternative structure.

Ashton et al (2005) wrote that to the extent that the self- and peer ratings made by lay observers of personality are inaccurate, this may be less important than one would suppose. This is unlikely to distort the results of a lexical study of personality structure (or of affect structure), as long as his or her responses are correspondingly biased with regard to variables that actually do co-vary with anxiety.

Ratings by close acquaintances seem to be more accurate than self-ratings (Kolar, Funder, & Colvin, 1996), although even self-ratings are valid predictors of criteria that are theoretically relevant to the traits being rated. Moreover, the fact that peer, observational and self-ratings are frequently used in lexical studies of personality structure is important, because the finding of similar factor structures from self- and peer ratings (Goldberg 1990) undermines the criticism that structures derived from these ratings merely represent individual perspective.

Regarding the claim that lay people do not understand the causes of personality variation as well as experts do, this claim might well be true, but even if experts do have a deeper understanding of the causes of personality variation, this would not necessarily make them more accurate observers of personality. It is argued that lay people would be almost as accurate as experts in rating targets on various trait adjectives (e.g. active, affectionate, aggressive, ambitious, anxious, arrogant, artistic, etc.), particularly if verbal ability is controlled (Lee, 2007).

However if we do assume that the accuracy of self- and peer ratings in lexical studies of personality structure is sharply limited by biases and errors in those ratings, and that expert raters would produce more accurate ratings than would lay person raters, it is still not at all clear how this would change the obtained structure.

To date there has been no specific suggestion made as to how self and peer ratings made by lay persons could be distorting some alternative and more complex solution that would consistently occur if the ratings were made by expert observers of personality (Goldberg & Saucier 1995), for discussion of the issue of expert versus lay observers).

In comparing the techniques of direct observation of traits with that of other methods the criticism is that the methods are different from those used in other sciences. This criticism invokes several of the other criticisms described above, including those regarding the reliance upon lay persons as observers and constructs used by lay persons. However the problem with these criticisms is that they are based upon false analogies. According to Ashton et al. (2005) for any of these analogies to be valid, they would need to apply to a scientific problem involving the following features: (1) a vast and unmanageable array of variables that are thought to be manifestations of a small set of major dimensions whose identity needs to be determined via factor analysis; (2) lack of any a priori rationale for selecting a set of variables to be factor-analysed (and notorious disagreement among ‘experts’ as to their variable selections); (3) a domain in which lay people routinely observe the variables— even if those people do not understand the causal bases of those variables—and routinely describe them using familiar adjectives.

The lexical approach describing personality structure is unique in science and is a sound basic for fitting traits to known activities and evaluating the influence of those traits on performance.

6.3.6 Justifying the ideas of personality evaluation through observation

To highlight the importance of personality influence on performance (MacCrae 1990), this approach seeks to justify a process carried out to establish a consensus of consultant project manager personality. The primary purpose is to justify whether personality traits influence are truly worthwhile for enabling the effectiveness of the consultant project manager, thereby setting a benchmark for engaging consultant project manager. In terms of justification, this approach corresponds to the mode of understanding by what means the consultant traits which makes their understanding of requirements become justified and common. It is similar to an 'examination process, because the consultant project manager in the process of identifying the client requirements is examining the client issues, and in turn is being evaluated for compliance with the client expectations. As such a common understanding of the personality traits which influence understanding of the client requirements are evaluated. This approach is essential for obtaining from the industry feedback and confirmation for the development of the trait construct for the briefing process. Therefore establishing an examination criteria and confirmation of personality traits through key methodology principles are essential.

6.4 The research approach

The primary aim of the research is to evaluate the influence of personality traits of the consultant project manager on performance in the briefing process. This involves observing the consultant project manager (in a natural setting to identify the significant personality traits) and so, prior to observing the consultant project manager in the cases and conducting the industry wide survey, a pilot study was undertaken to identify the significant personality traits of the consultant project manager to develop an inventory, while at the same time, acquiring an overview of the statistical validity of each trait. The pilot study was approached initially through face to face discussions with five

consultant project managers (from the sample population drawn) who have over ten years (each) experience in briefing, meeting academics at various forums , for example; the Association of Project Managers (APM) and the fourth International Conference for Postgraduate Researchers of the Built and Natural Environment (PRoBE). The aim was to engage in brainstorm issues of trait influence in briefing with the consultant project managers, therefore, getting various opinions from professionals involved in briefing.

This criterion of experience in construction briefing was guided by the principle of requirements by the American institute of constructors (Dumarcher 2005).

These processes were followed by telephone discussions with fifteen-consultant project managers (from the sample population). They were contacted with the assistance of the Association for project Management (APM) and Royal Institute of Chartered Surveyors (RICS) professional bodies. The telephone conversations were followed up by sending questionnaires to these professionals, and the five consultant project managers who were involved at the initiation stage (twenty professionals)(appendix A). They were all required to rate the importance of traits. The objective was similar in intent, basically to identify the significant traits likely to influence performance in construction briefing. A typical question in the questionnaire is shown in section 6.4.2.

Recognising that there is almost no literature on the relationships between personality traits and performance of the consultant project manager in construction briefing, it was essential to use the list which was derived logically, but significantly related to the list of forty seven (47) traits developed (section 4.3.4) for consultant management professionals in decision making roles (Atalah 2009). This list was adopted as the benchmark for the pilot survey questionnaire (appendix B) on the basis that the briefing process also involves decision-making (Yu et al. 2008; Smith and Love 2004). In addition there is sufficient linkages between the lexically defined traits factors (Goldberg 1990) and briefing to suggest some of these traits are related to the consultant project manager performance and will ultimately influencing performance in the

briefing process.

In the process there were discussions about how each trait relates to the consultant project manager performance in construction briefing (appendix E). Consequently each question was examined to link with the interviewees. The consultant project managers were also given the opportunity to read the questions. This provided a useful basis for assessing their understanding of the questions.

On the basis of the feedback, and the rating scores the results were analysed statistically, using the SPSS software tool. From the analysis each traits with a mean value of six and above was used to develop the trait list (inventory). The resulting (initial) list of traits developed was again discussed with the consultant project manager for acceptance or rejection and validation. From this process, sixteen personality traits were identified as significant for influencing the consultant project manager performance in construction briefing. These comprised the final traits list and are identified (in appendix F) by abbreviation to identify them from those rejected. Specifically these traits are defined as follows: assertiveness, communication, competence, conceptual ability, conscientiousness, consideration, deliberation, human relations, ideas, office details, openness, sales/management's self-discipline, teamwork-KSA, trust, and values (Atalah, 2009; Hartman, 2008) and are incorporated in the final(refined) questionnaire for use in the case studies and industry wide survey..

It is the expectation, based on the personality and performance theory (Costa 1996) that there will be relationships. Conceptually the links between personality traits and performance relationships are depicted (fig 6.3) to give a theoretical conception of the influence of the 16 traits on the performance of the consultant project manager in the briefing process..

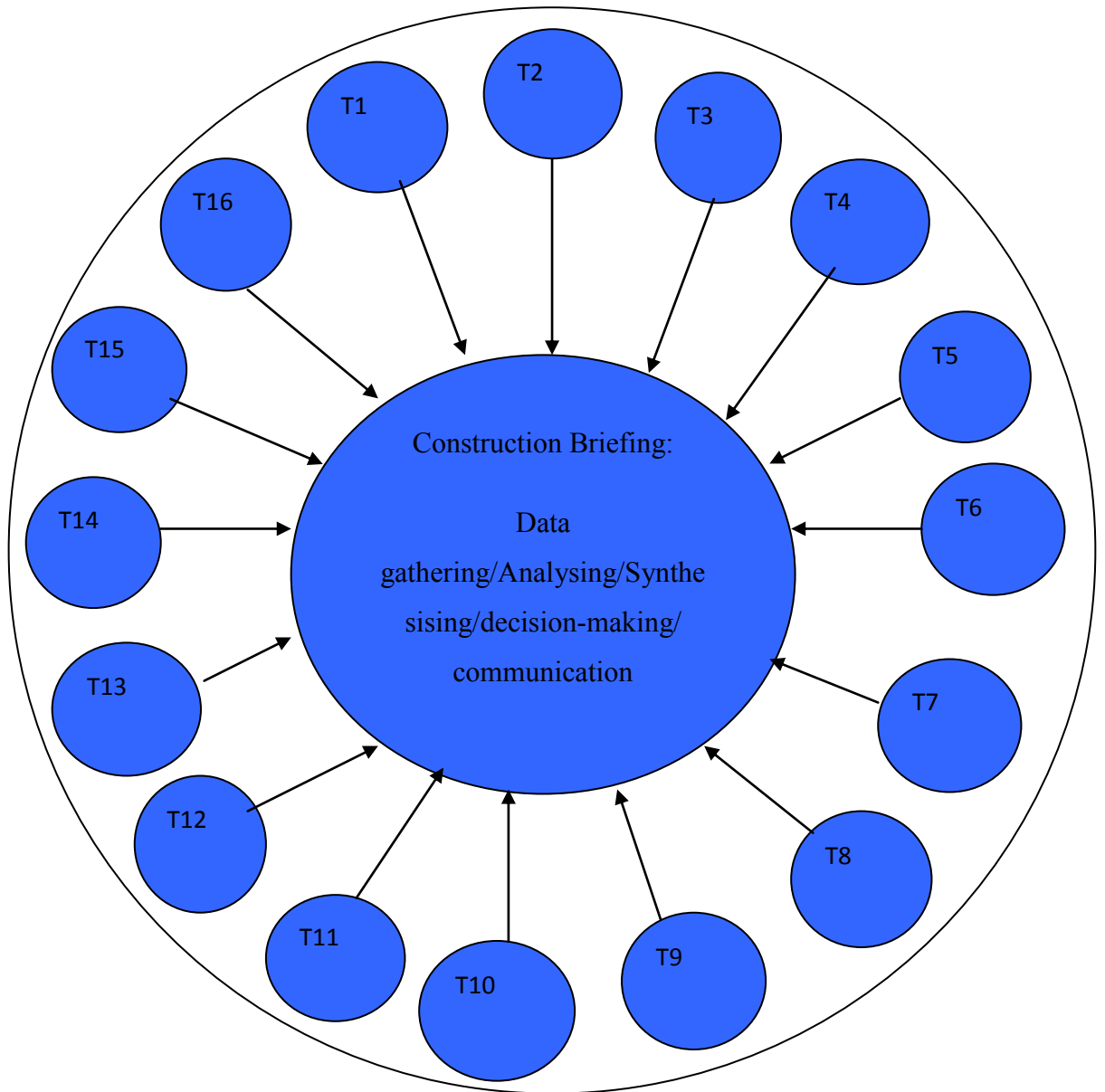


Fig 6.3 Effective briefing- 16 personality traits for assessing the CPM performance

Though it is unclear how these traits are related to or will influence the performance of the consultant project manager performance in briefing there is enough explanation in the literature (Atalah, 2009; Hartman, 2008) to suggest that these traits are significant for predicting relationships between traits of the consultant project manager and performance in the construction briefing process. The likely outcome and influence are explained below as follows;

- **(T1). Assertiveness (*A*)** refers to an individual who has control of the work situation (Atalah 2009). It is characterised by such adjectives as dominant, forceful and effective (John, 1990). Meta-analysis suggests assertiveness is consistent predictors of confidence in performance. For example Atalah(2009) found that assertiveness is indicative of the construction management professional who is dominant, forceful, and effective in his/her roles. Assertiveness has also been found to be associated with effective decision-making and achievements (Atalah 2009). For example an individual who is involved in a project and has to make the decision which determine its outcome of the project dynamic can percolate with enthusiasm or fizzle with frustration depending on the flexibility as a leader. Although the assertive individuals may be flexible in his or her decision-making, he/she evidently stand ground on the things that matter most and address the issues of interest to ensure an effective outcome for the client (Atalah 2009). This suggests that assertiveness is likely to be related to consultant project manager role in coordinating and managing the briefing process. In other words assertiveness is likely related to effective construction briefing.
- **(T2) Outstanding communicating- Oral & Written (*CM*)** refers to an individual ability to exchange appropriate ideas and pass on information to others. This also includes the ability to motivate team members. Every team and every project is different, so an individual must be able understand style of other to communicate information. According to Yu et al. (2008), the construction

briefing process is essentially one of communication; this suggests that the consultant project manager who is able to communicate well is likely to get the correct message across to all stakeholders. Studies indicate that outstanding communication includes having a wide vocabulary on the issues and be able to communicate them effectively. Hartman (2008) found that the exceptional project manager communicates well. It is likely communication is related to effective construction because it requires good communication (Yu et al. 2008).

- (T3) *Competence (Confidence & Self-esteem) (CP)* refers to an individual sense and ability to deliver the task successfully. It is the sense that an individual is capable, sensible, prudent, and effective in his or her assigned roles. According to Camden (2008) and Hartman (2008) a competence is more linked to knowing that you have done everything possible to prepare for the task at hand. For example, a competent individual is more likely to perform well (Barrick and Mount 1991). Compared with an incompetent person who is likely to be more quiet and withdrawn a competent person demonstrates confidence possessed from the skills, and knowledge base. Competence is likely to be related to delivering an effective construction briefing process.
- (T4) *Conceptual ability (CA)* refers to an individual ability to be responsive to situations. Atalah (2009) found that the conceptual ability of an individual was able to define the decision made, especially the consultant project manager decision-making in his or her roles. Similarly Hartman (2008) found that owing to good conceptual ability the exceptional project manager is good at finding solution to problems. This is also recognised in wisdom and intuitive ability of an individual and found to be indicative of knowledge in determining right from wrong. This traits factor is likely to have a relationship to the decision making process of consultant project manager in identifying and defining the client requirements in construction briefing process (Costa & McCrae 1992).

- (T5) *Conscientiousness (CN)* refers to an individual propensity for carrying out work (Costa & McCrae 1992). The conscientiousness person is generally aware of what is happening around him or her and good at carrying out tasks within a reasonable time (Costa & McCrae 1992). The individual likes to deliberate and there is the tendency to think carefully before acting (Atalah 2009). This is likely to be related to the awareness of the consultant project manager in delivering an effective briefing process. Analysis suggests conscientiousness is good for establishing at the very least, good relationships with others in team work.. A conscientious person generally keeps track of things (Atalah 2009). The conscious individual demonstrate good common sense, knowledge, skills and abilities which are good for working in teams to get to the core of what matters (Atalah 2009; Hartman 2008). Together these work requirements suggests that conscientiousness is likely to be related to impacting the consultant project manager performance in construction briefing.
- (T6) *Consideration (CS)* refers to the propensity of an individual to give careful thought to the issues at hand and to establish at the very least, good relationships with others and standards for work execution (Camden 2008). Atalah (2009) found consideration is indicative of an individual ability to develop a willingness to accept other views, characterise by mutual trust, respect, thoughtfulness and warmth towards others. This is likely to be significantly related to delivering effective briefing.
- (T7) *Deliberation (D)* refers to an individual with specialise knowledge of the field and a willingness to give much careful consideration and thought. Atalah (2009) found that deliberation predict a careful approach to work performance. It is also found to be associated with the tendency to think carefully before acting, evidence in the way an individual interact with others (Atalah 2009). This is likely to have an influence on effective construction briefing.

- (T8) *Human relations (HR)* refer to an individual with the ability to relate to others and problems. Studies suggest that human relations are consistent in predicting individuals with the ability and technique to handle problems and to diagnose the causes (Atalah 2009; Cadhem 2008). Human relation and problem solving traits are generally of individuals possessing the technique to solve problems. It is found that an individual with this trait is passionate about solving problems, because that is what you'll be doing all day. This style evidently includes engaging teams and key stakeholders in analysing customer issues and decision-making (Atalah 2009; Camden 2008) and exhibit a positive relationship to understanding the client core issues and defining the project requirements to meet the expectation of the client. This is likely to have a relationship to effective construction briefing.
- (T9) *Ideas (I)* and Creative thinking refers to an individual intellectual curiosity about their inner and outer world, their ability to think outside the box in difficult situations. Intellectual curiosity tends to inspire a search for information to address problems. There is the desire to solve the issues at hand. This implies being creative, tenacious, and knows how to use other resources effectively. Hartman(2008) indicated that the exceptional project manager are those with creative abilities which means that he/she need to be able to focus their attention for long periods of time. They will also need to be able to continue to process a problem in the background when they're not giving it full attention (Atalah 2009). Carr (2002) found that construction professional has a preference for defining issues. This is related to identifying and defining the client requirements in the construction briefing process, quite evident in the brainstorming sessions.
- (T10) *Office details (OD)* refer to the ability of an individual ability to establish control of a process (Atalah 2009; Camden 2008). It can be equated with assertiveness and confidence but is particularly liked someone taking

responsibility easing into control of the work situation taking ownership. This is likely to be related effective construction briefing.

- (T11) *Openness (O)* this refers to someone with the willingness to try different activities, tapping in to your own abilities and pressing on for a solution. This is a measure of depth, breadth and variability in a person's imagination and urge for experiences (McCrae & Costa 1992). Intellect, creative, imaginative are some facets of openness to agreement. Openness to experience is characterized by adjectives such as intelligent, imaginative depth of feeling and need for variety. Those who are open to experience display a willingness to try different activities, tapping in to your own abilities and pressing on for a solution. This is a measure of depth, breadth and variability in a person's imagination and urge for experiences and relates to relate to intellect, opens to new ideas, cultural interests, educational aptitude and creativity. Those with a high openness to experience have broad interests, are liberal and like novelty (McCrae & Costa 1992; Howard & Howard 1995). They are trust worthy and have integrity and are able to gain the trust of others while demonstrating the capability of keeping ones confidence and interest in mind (Atalah 2009). They are generally good leaders which are a measure of how to deal with individuals in team of workers or selling ideas. A person with this trait focuses on motivation and not intimidation (Atalah 2009). This suggests that openness is likely to be related effective construction briefing.
- (T12) *Sales-Management (SM)* refers to an individual propensity for co-ordinating teamwork and establishing good interpersonal relationships (Atalah 2009). Meta-analysis suggests sales-management is consistent predictors of effective performance. For example Atalah (2009) found that leadership/sales/management is indicative of the interest shown in dealing with people and leading teams in job situation. Sales/management is likely to be related to effective construction briefing which relies on co-ordination.

- (T13) *Self-discipline (SD)* tells of an individual who carry through on tasks diligently. Atalah(2009) found that self-discipline predicts thoroughness, the ability to begin tasks and carry them through completion. The disciplined individual is self-achieving. In self-achieving he or she is likely to anticipate others' expectations and adjust behaviours accordingly to achieve the tasks at hand. They are self-propelling and have the determination to be successful. Those with good self-discipline typically strive to responsive to achieve interpersonal and situational specifications of behavioural appropriateness. This is likely to be related to effective construction briefing.
- (T14) *Teamwork-KSA (TW)* refers to individuals operating in team for the common good of achieving a task, applying appropriate knowledge, skills and abilities. Atalah(2009) found that teamwork is associated with having ideas and the ability to come together and get to the core of what matters (Atalah 2009; Hartman,2008). The briefing process is project focussed and interacting (Yu et al. 2008). This trait is therefore likely to be related to effective construction briefing.
- (T15) *Thrust (T)* refers to an individual with integrity and who has the ability to gain the confidence of team members. Atalah(2009) found that trust and integrity is indicative of disposition to believe that others are honest and well intentioned. This is about gaining trust of stakeholders who can rely on your judgement. This is likely to be related to effective construction briefing.
- (T16) *Values (V)* refers to an individual who attaches value to his work. They attach a readiness to re-examine standards, able to recognise and accept their mistake and ready to take ownership (Howard 1995). This is likely to be related to the consultant project manager roles in construction briefing. This is likely to be related to effective construction briefing.

The performance of the consultant project manager has also been found to be

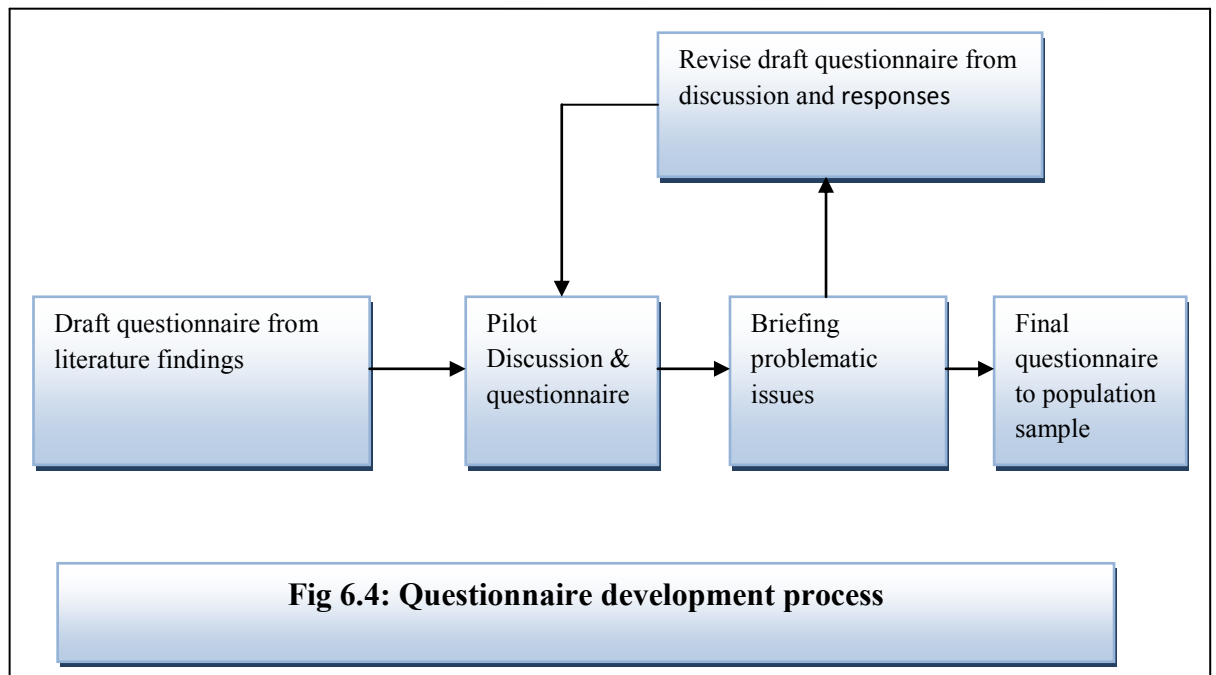
associated with a self determination of effective outcomes (Bandura 1997). This can be viewed from the perspective of effectiveness, where effectiveness is the desire and determination to carry out the tasks of construction briefing in accordance to expectation, arising from the accumulation of past experience with success (Sherer et al. 1982). Since the expectation of success in construction briefing is influenced if the consultant project manager is able to utilise this experience, knowledge, skills, attitude and other qualities acquired from past experience to effectively carry out the tasks (data gathering, analysing, synthesising, decision-making and communication) in briefing, it is anticipated that effectiveness in performance will be related to the way the project is executed and personality is involved.

6.4.1 The development of an improved questionnaire for the survey

The in-depth feedback received from the pilot study and the identification of the sixteen traits likely to be related to the consultant project manager performance in briefing, contributed to the development of an improved questionnaire in content, scope, clarity of questions, concepts, and length of the questionnaire. A copy of the refined questionnaire is included in appendix C and D.

It was appropriate for the final questionnaire to have four sections (appendix D) so that the key issues relating to the nature and significance of relationships could be determined. As a consequence, each carefully structured to give answers to the questions emanating from the literature and enabling analysis to be made. As the questionnaire survey focussed on getting information from the wider industry, considerations were given to population sample size, inducements for timely responses to answer the questions, opportunities to make comments on several statements and questions. The questionnaire to all consultants was the same and was designed in a simple “tick-it” format to facilitate easy completion. A Likert scale was generally adopted. This instrument is widely used for measuring opinions, beliefs, and attitude

(Yu et al. 2008)



SECTION A:

Section “A” was specifically designed to find out about the consultant project manager briefing practices. They have been structured in a way to get a response to matters relating to the background of the different personalities involved in the briefing process highlighted in the research literature.

The literature reviewed indicated that the briefing process typically involves different personalities interacting to identify the client requirements and the different personalities from the various backgrounds and experience is at the root of the problems

of briefing, (because individual differences are influenced by personality traits). Since the case involved evaluating personality traits it was necessary to get a mix of the consultant background including age, sex, experience in briefing among other characteristics.

It was therefore important to know population mix involved in briefing and to validate the presence of the different personality to determine the impact of traits on the effectiveness of briefing. With the aim of the research focussed on evaluating the influence of these traits this information was essential to understanding the background of the consultant project manager and analyse influences.

SECTION B: -

Section “B” was specifically designed to find out the about the philosophy and standing of the consultant project manager on the briefing process They have been structured in a way to get a response to matters of concern to the consultant project manager thinking about briefing. The literature highlighted that briefing is critical to the success of projects (Yu et al. 2005). This makes it even more important to know the consultant philosophy to be able to determine to what extent their philosophy influence their approach and specific methods.

SECTION C:

Section “C” focuses on identifying the briefing variables and perceptions. The questions have been specifically designed to find out about the consultant project manager briefing practices. They have been structured in a way to get an indication of the level of agreements on specific levels of briefing. The literature on briefing indicated that the consultant project manager briefing practice is based on his or her understanding of the process. It was therefore important to know how the consultant sees the briefing process.

SECTION D:

Section “D” was specifically designed to find out the personality traits which are closely associated with the consultant project manager in the briefing process and the influence on performance. They have been structured in a way to get a response to matters relating to the importance of personality traits and the extent to which each trait is important and influential to the effectiveness of the consultant project manager briefing process. The literature review indicated that individual performance is influenced by traits. It was therefore important to know which traits influence performance in the briefing process and to validate the proposed trait theory in the briefing process.

This added option was chosen with the objective of generalising the theory also. The theory was quite comprehensive hence the greatest limitation is the limited data generated from the case study and other cases across the sector.

6.4.2 A typical question from the pilot study questionnaire

Question: In your experience:

- (a) Please review the list(below) and kindly indicate the trait that describe you , then,
- (b) On a scale of 0 to 10 (*0 being to a low degree, and 10 to a very high degree*), *please* circle the number indicating the extent to which each trait (identified) is important and influences your effectiveness.

Table 6.4 -trait identification check list- illustration

No	Trait	Trait Description	Please place a tick(s) against the trait observed	Comments
1	Achievement striving	Aspiration Levels.		
2	Activity	Rapid tempo and vigorous movement.		
3	Agreeableness	Altruism.		
4	Altruism	Active concern for others.		
5	Angry hostility	Tendency to experience anger and frustration.		
6	Art	Interest in activities that make beauty.		
7	Assertiveness	Dominance, forceful, and social ascendancy.		
8	Communications	Interest in using language, either writing or speaking.		
9	Competence	The sense that one is capable, sensible, prudent, and effective.		
10	Compliance	Deference to others in reaction to interpersonal conflict.		

11	Computations	Interest in activities that use numbers.		
12	Conceptual ability	Ability to learn job requirements within a reasonable time.		
13	Conscientiousness	Planning, organising, and carrying out tasks.		
14	Consideration	Ability to develop job relationships with subordinates, characterized by mutual trust, respect, consideration, and warmth.		
15	Deliberation	The tendency to think carefully before acting.		
16	Dutifulness	Adherence to ethical principles and moral obligations.		
17	Employee	Attitude toward the subordinates: knowing of their motivations and needs.		
18	Excitement-seeking	Craving for excitement and stimulation.		
19	Extraversion	Outgoingness.		
20	Fantasy	Openness to fantasy.		
21	Feelings	Openness to one's own inner feelings and		

		emotions.		
22	Gregariousness	Preference for other people's company.		
23	How supervise	Supervisor's knowledge and insight concerning human relations in industry.		
24	Human relations	Supervisor's techniques to handle problems, lateness, apathy, arguments.		
25	Human services	Interest in helping other people.		
26	Ideas	Intellectual curiosity.		
27	Impulsiveness	Inability to control cravings and urges.		
28	Management	Feeling toward top management, pay, company policy, benefits, plant regulations, and other aspects over which the supervisor has little control.		
29	Mechanical	Interest in knowing how things work and using tools to make or repair things.		
30	Nature	Interest in outdoor activities, such as growing		

		or caring for plants or animals.		
31	Office details	Interest in keeping track of things, people, or information.		
32	Openness	Willingness to try different activities.		
33	Order	Characteristics of organisation.		
34	Positive emotions	Tendency to experience positive emotions.		
35	Sales/Management	Interest in dealing with people, such as leading a team of workers or selling ideas.		
36	Science/Technical	Interest in discovering or understanding the natural or physical world.		
37	Self-discipline	The ability to begin tasks and carry them through to completion.		
38	Straightforwardness	Frankness, sincerity, and ingenuousness.		
39	Structure	Ability to define a person's own role and those of subordinates to achieve goal.		

40	Supervision	Attitude toward the duties and responsibilities of a supervisor; a person's annoyances, desires, and needs; feelings toward other supervisors.		
41	Teamwork-KSA	Knowledge, skills, and abilities (KSAs) that predict ability to work in teams.		
42	Tender-mindedness	Attitudes of sympathy and concern for others.		
43	Total score	Individual's attitude about being a supervisor.		
44	Trust	Disposition to believe that others are honest and well intentioned.		
45	Values-standards	Readiness to re-examine values in keeping with standards.		
46	Vulnerability	Vulnerability to stress.		
47	Warmth	Issues of interpersonal intimacy.		
Notes on behavioural pattern at specific briefing phases:				

6.4.3 The development and refining process

Dr Atalah(2009), from the Bowling Green State University, Bowling Green, Ohio authored a paper on the personality traits of construction management professionals. The objective of his study was to identify the personality traits of construction management professionals, noting distinction between the population and different profession. It is the finding of this and Hartman (2008) studies that are used as the basis of the pilot study for identifying the traits of the consultant project manager (that guide this research). The exception is that the direct observation techniques are more subjective of the analysis.

There is also a difference between the case study, across site observations and questionnaire techniques for collecting data (case study and questionnaire). It gives the sample population the opportunity to self-rate and the choices to get their opinion across. Specifically, the questionnaire was sent out to encourage respondents to self-rate themselves. The data received when analysed will be cross-tabulated. In this way a determination will be made on the number of traits significantly related to the consultant project manager performance in the briefing process. Further the results are compared and contrasted with trait influence on performance.

6.4.4 Dichotomies implied in the questionnaire

The dichotomy of personality implied in each question on the questionnaire remains open to subjective judgment and expert opinion. What is observed and experience by one may or may not be implied to another. Each dimension of personality inferred in each question relates to the critical area in the briefing process as described in each question. Within any such area an individual's personality traits may drive his or her performance in accordance with a specific personality dimensions.

The challenge then becomes which of these dimensions of personality trait has

the greatest influence and drives the consultant project manager performance in the briefing process. The analysis in this research is intended to define these issues.

While not all of the questions may yield statistical significance in acceptable range, each question on the traits and relationships will be analysed to identify the dichotomy that yielded the strongest association. Certain questions carried an implication of being driven by more than one dimension of personality, but it is the strongest relationship that will be included in the assessment of the implied dichotomies.

6.4.5 Validity

The validity of an instrument is the ability to measure what is intended to be measured (Naoum 2004). In this case, what are measured are personality traits to evaluate influence on the performance of the consultant project manager in the briefing process. For this research to be valid therefore the instruments used must be able to provide data which are statistically reliable. The reliability of the data is therefore evaluated by means of the correlation with the collected traits scores in the case study and the respondents of the questionnaires to note if validity can be detected. The results are presented.

6.4.6 The specific population sample for the questionnaire survey

The goal of the research is to evaluate the influence of personality traits on the performance of the consultant project manager in the briefing process. It was therefore logical for the consultant project manager population to be the target population to augment the data collection strategy. This section relates to the method used to selecting the participants to respond to specific questions, and in the case of the natural setting to

observe performance, as a key component across site (specific cases) for achieving the purposes of the research.

The selection of a sampling is crucial in a survey. The difficulty here is that of identifying the correct and appropriate sample from widely geographically dispersed population of consultant project managers. In addition, the existence of many such consultant project manager and organisations within the UK construction industry naturally imposes limitations on the size of the sample to be surveyed. This is clearly the case since it is virtually impossible to survey the whole sample due cost and time limitations.

In contrast to other sampling strategy that otherwise depends on selecting random and statistically representative sample for the purpose of generalisation in quantitative research, this approach is construed as purposeful sampling to suggest a suitable strategy for the purpose of getting first hand observation and impression of the personality traits of the consultant project manager in the briefing process to satisfy the research purpose (Kao 2004 citing Patton 1990; Maxwell 1996).

The logic of purposeful sampling is in selecting appropriate cases which provide crucial data for the study (Patton 1990), thereby providing the opportunity to observe the consultant project manager and to learn 'a great deal about the issues of central importance to the research'. The principle is to select deliberately an adequate number of samples, which are able to provide sufficient and rich information, to achieve the purpose of the qualitative research. It is argued that the utility and credibility of small, adequate and purposeful samples should be judged on the basis of the purpose and rationale of the research (Kao 2003).

6.4.7 The subjects - purposeful sampling

The situation of this research requires a population of interested consultants with

experience in conducting the briefing process, and though it was not practical for the entire construction consultant population to be surveyed in the questionnaire survey or observed, steps were taken in the research to involve an adequate sample pool of professionals and cases, after verifying that the pool and cases adequately represented the population profile.

The development of the questionnaire for the survey therefore required a sufficient sample list from construction project manager, consultants; professional bodies and other related groups. This was achieved through contacting a number of national organisations and respected websites that comprise the population of interest facilitated this process. These organisations include; RICS; APM, Google.Com to identify consultancy organisations that practice PM. who made up the sample scheme for the “population of interest”.

6.5 Data collection

In order to evaluate the influence of the consultant project manager personality traits on performance in construction briefing it is necessary to understand the relationship between personality and performance. According to Anderson (1996) personality will impact on performance and this will result in varying levels of performance, but a given performance could correspond to, or influenced by more than one trait. The pilot study was conducted to identify the traits of the consultant project manager which influence performance in construction briefing, and this knowledge contributed to refining the final questionnaire for the survey to collect the data relating to personality traits and performance. Further, the main medium considered appropriate for stratifying the research objectives is the field work (which includes, observing cases across the industry and the questionnaire survey approach) and facilitates engaging a number of consultant project managers in the UK. This process which underpins the approach is illustrated in fig 6.5 below. Essentially this illustration seeks to define the

cases and present the arguments for the structured approach in the process of observation, which was conceived as essential, on the basis that the qualitative strategy suggests a natural setting where meaning can be applied. Because observation and data collection could not have been completed on one occasion, the need arises for several visits to be made for data collection in the natural setting. The process which followed a pattern is explained below, which includes first set of visits (initiation), followed up by visiting other sites, and the industry wide questionnaire survey.

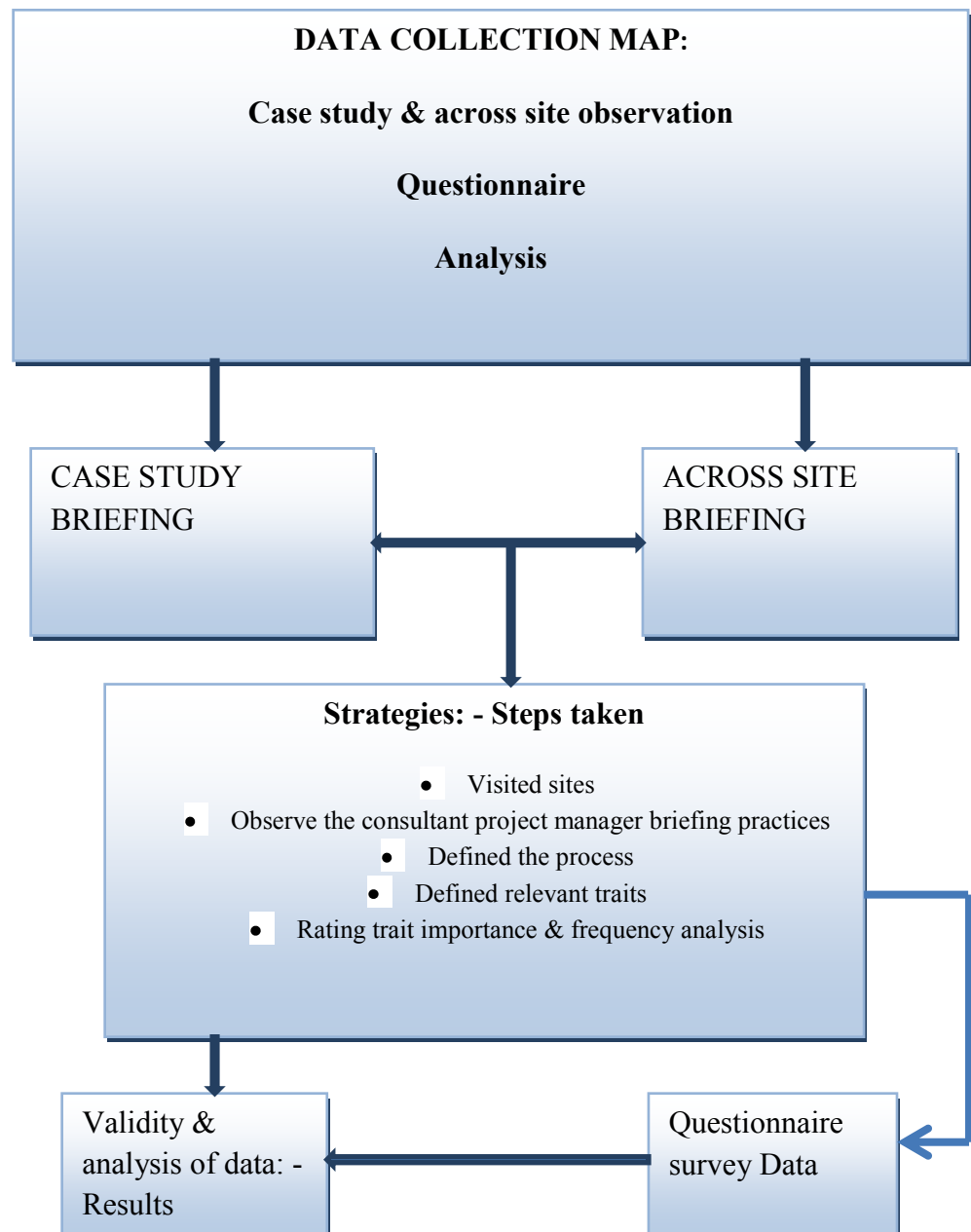


Fig 6.5 Conceptual map illustrating the data collection process leading to data analysis

6.5.1 The cases

Client organisations where briefing was conducted by the consultant project manager were sought to get the opportunity to observe the process and be able to identify the personality traits which are related to performance in the briefing process. The case study in particular was conducted in a client organisation in the petrochemical sector. This was a specific and detailed case evaluated, while the other cases, defined as across site cases, facilitated observing the consultant project manager in the briefing process for client organisations other than the specific case study.

The contention is a wide cross section of cases will enhance the validity of the data, providing first-hand observation and varying views on trait association. It is essential to note that though the intention was to observe as many cases (across various sites) as possible, only three cases were observed. The primary reason was the unavailability of other cases which involved the consultant project managers conducting briefing in client organisation, during the timeframe set out for data collection. Thus the industry wide questionnaire survey supplemented the case study and gave much more weighting to the validation process. Crucially, since all evidence is of value when carefully appraised (Creswell, 1998) and no one kind of evidence is sufficient on its own, such approach has the added value of providing opportunities for cross referencing data for trends. Because the research objectives underline a process of observing current practices it followed naturally that the process should be logical and properly developed. Therefore it was necessary to observe the process in a natural setting; as such the proposed survey work for the cases involved a process which necessitated visiting the sites, conducting unstructured interviews (appendix E) observing the consultant project manager briefing practices and rating personality traits, linking the data to the research objectives. This is further explained below.

6.5.2 Visiting the sites

The observational technique was employed to observe the briefing process and identify the personality traits of the consultant project manager which influence performance. This case in the petrochemical industry was chosen on the basis of opportunity and suitability for answering the research questions including suitability for collecting the relevant data, and appropriateness and timing of study. Because of the nature of the data to be collected this involved visiting the site on several occasions. These visits were co-ordinated to fit in with specified timeframes (meeting) and schedules, coinciding with the periods when the consultant project manager was conducting briefing. It is during these specific sessions the traits exhibited by the consultant project manager were recorded and rated. The adjectives describing the traits were identified on the scoring sheets, to make it simple to define the traits of the consultant project manager by the actions. The natural setting enabled giving an observational account of the briefing process. Similarly visiting the site provided the opportunity to assess whether the practice of the consultant project manager represented a personal undertaking to answer the question on whether procedures are influenced by personality traits.

6.5.3 Initiation of the case study process

The process was approached through initial contact with the client organisation and the project was evaluated to determine whether it provided the opportunity to answer the research questions through (facilitated) direct observation of the consultant project manager. The focus on identifying traits was considered innovative, but well suited for this particular setting because of the opportunity to observe first-hand the consultant project manager (Ashton et al. 2005).

The case lasted for over ten months (initially set for six but was extended to ten because

of project and research requirements) where observations took place at different times, intervals and days averaging about 4 hours per session, with periodic breaks. This was considered sufficient for evaluating personality trait influence.

6.5.4 Other sites visited across the industry

It was necessary to compare and analyse several outcomes to be able to examine trends, as such it was necessary to have a wider view of the industry practices, by visiting several sites to answer the research question. Though in these cases observations were on a singular basis and were essentially one off opportunities, the data was important as it was collected from observing practices in other client organisations, further providing vital data on the consultant project manager performance and determining whether the briefing process reflects a personal undertaking. In each case the consultant project manager conducting the briefing process was observed in meeting room, similar to that adopted in the case study. This also allowed for face-to-face interaction and communication with key personnel involved in the briefing process to understand more about client requirement processing. By asking questions (Appendix E) it was necessary to observe the respondent's responses.

Once more the observation process involved recording and rating the personality traits to attached significance by giving each trait a score on a Likert scale between 0 to 10 (with zero being of no importance, and ten of great importance). The process involved ticking the trait observed to best define the action of the consultant project manager after the event. A score sheet with the Likert scale of range between zeros to ten;

In addition the process involved preparing summaries of all the briefing sessions observed, records of traits identified and the rating matrix in the form of tables. This is done to facilitate analysing the results descriptively and statistically to evaluate relationships of each trait to the performance of the consultant project manager, thereby

providing the basis for a comparative analysis with those traits in project planning and implementation.

During the process three persons collected the data during various intervals. Training for recording traits data through direct observation was received. This training was received from a psychological training organisation. The author of the research was supported two other individuals from the client and consultant teams. This was facilitated by sites visits as explained below.

6.5.5 *Questionnaire survey*

The questionnaire provided the added dimension of engaging a wide cross section of consultant project managers to solicit their views and so the survey was conducted to include the wider population thereby generating a representative sample from a wider perspective of the industry, thereby filling gaps missing in the case studies. It also provided the opportunity for respondents to identify the traits, which best define their performance in the briefing process, and also to rate how influential these traits are on their performance. Most importantly, there were opportunities for respondents to self-reflect themselves and to evaluate how the indicated traits contribute to influencing their performance towards delivering successful briefing process

6.6 Data Analysis

It's essential that the data collection and analysis be a simultaneous process, especially in qualitative research (Naoum 2004; Creswell 2003). Once the data on briefing approach and personality traits are collected it becomes essential to analyse the data for relationship between personality traits and performance. A variety of statistical measures for uncovering potential relationships between two or more variables exist,

and so in order to test the research proposition different analysis were conducted. Importantly the analysis tools of measures can be the descriptive statistics methods and inferential statistics method, involving the Pearson correlations moments, which are used to determine mean, standard deviation, frequency of occurrence, correlation coefficient measurements, cross tabulations which for example is a joint frequency distribution of cases with two or more variables. In addition these measures can be applied to evaluate the extent to which personality traits influence performance and this is employed to assess the consultant project manager performance in briefing.

Since the primary goal of the survey in this study is to evaluate the influence of personality traits on performance which relies on the existence of a relationship between personality and performance, data analysis methods are used to clarify the relationship between the dependent variables (performance) and the independent variable(sixteen personality traits). This includes employing statistically, the correlation coefficient method.

These are commonly used statistical techniques to evaluate personality data in research, where the primary examination of the relationship between the measured traits of personality and the consultant project manager performance in the briefing process is the Pearson Product-Moment Correlation Coefficient. This examination will therefore allow the research to determine if there exists a statistically significant relationship between the measure of effective performance, ultimately effective briefing, thereby giving an idea about the strength or direction of such a relationship (Fine 2006).

6.6.1 Case studies data measures

This section introduces the measures used in the analysis of the data obtained from the case study and across sites. The independent variables include the sixteen personality traits; whereas the dependent variables include (the consultant project

manager performance in the briefing process). The evidence includes an observational account of the briefing approach and personality traits which influence performance. This calls for careful interpretation. Hence Person-moment method has been employed to determine relationships between personality traits and performance, and influence of traits on performance.

Essentially briefing effectiveness was determined subjectively. It was based on observation and the extent to which the client and observer believes that the process was effective.

A number of potential biases can diminish the validity of the research. In order to improve the validity of the research the study used the sixteen traits items reliability test to test the internal consistency and validity of the data, using Cronbach's alpha.

The primary analysis for correlations of relationships between personality traits (observed) and performance enabled the research to determine if there exists a statistically significant relationship between the measure of effective performance and personality traits in the briefing process

6.6.2 Questionnaire survey data measures

This section introduces the measures used in the analysis of the questionnaire survey data. The independent variables include the sixteen personality traits and three dependent variables include the consultant project manager performance in the briefing process. In this case briefing performance effectiveness was measured by the self-reported questionnaire which explores the consultant project manager perception (based on feedbacks) of the extent to which they believe that the briefing process was effective.

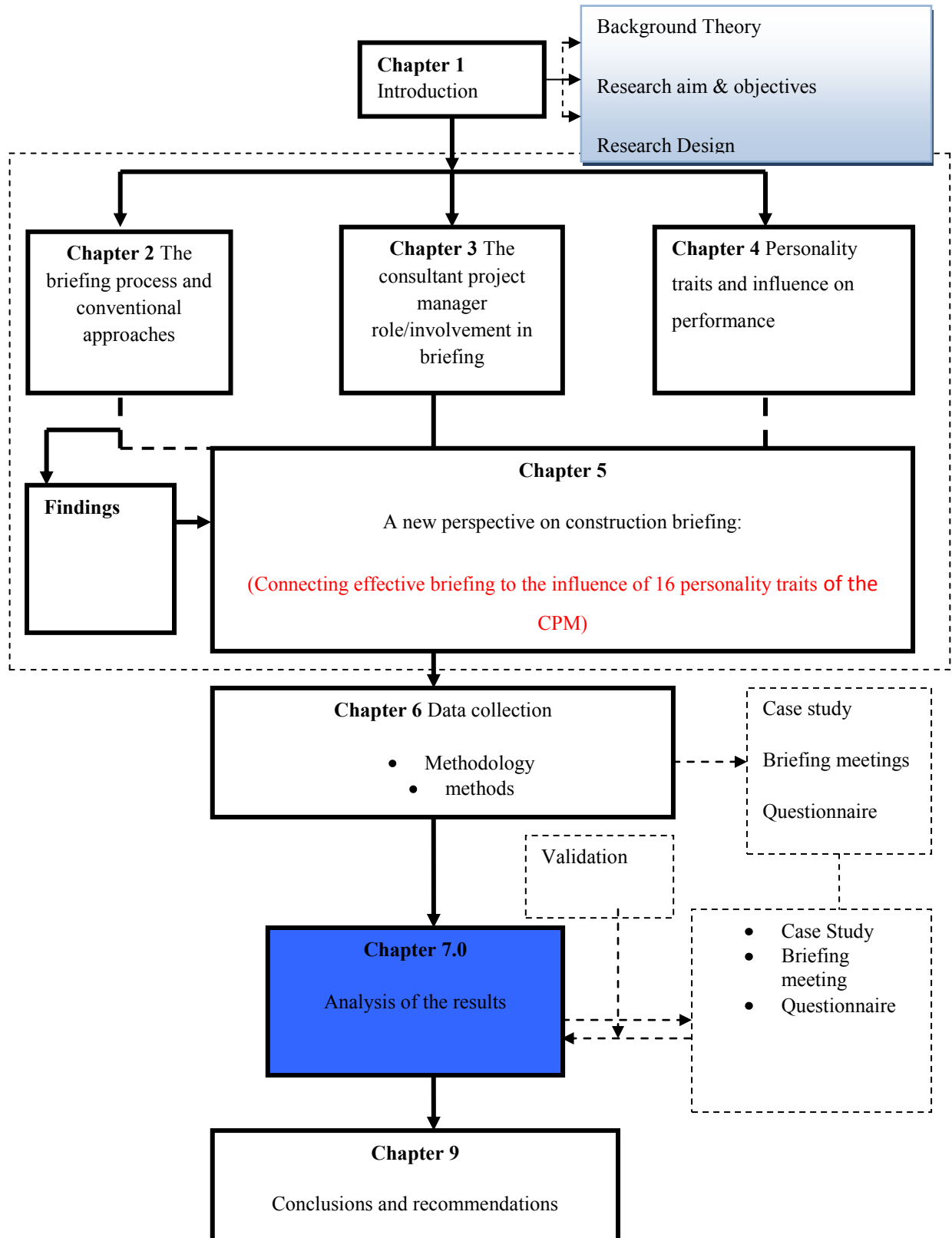
The study used the sixteen traits items. Internal reliability was found, using Cronbach's alpha, the higher the scores the higher the consistency. Further the statistical analysis

derives values such as mean, standard deviation and frequency of occurrence. The Pearson moment method measured the significance of the relationships between performance of the consultant project manager and traits.

6.7 Summary

The importance of adopting an appropriate methodology in a given research work is established. While it can be argued that there is no one best method for conducting all research work, the nature of the problem and the circumstances surrounding the research are essential for selecting a specific research method. This chapter reviewed the literature on research methods and strategies. It identified the main approaches to research, strategies supporting the various approach and inquiry. These were evaluated within the framework of the present research. The outcomes of this evaluation led to the adoption of the qualitative research strategy, incorporating the ethnographic, case study and phenomenology approach for the research within an interpretative framework, thereby linking the various methods for data collection. The data collection methods were reviewed and the direct observation and postal questionnaire survey techniques were opted for, since by the very nature of the data sought, emphasis was on breadth rather than depth of information. The quantitative neither the mixed approach was adopted (as independent approaches) for the trait identification and evaluation phases, because the study focuses on traits influence on performance and traits identification and relationships in a natural setting and since this involves a direct observation and self-assessment driven approach to determining influence, these would not have satisfied the research aim and objectives.

Chapter 7 Analysis of the results, Part 1- Case Study and across Site Observation



7.1 Introduction

This chapter presents the results of part one of the empirical study aimed at uncovering current day briefing practices, relationships between performance and personality traits, and the extent to which personality traits of the consultant project manager influence the effectiveness of the briefing process.

Initially, it presents an observational account of the consultant project manager briefing practices (from a case study and three other cases). Details of the groups, the background of the professionals and numbers of sessions observed are shown in table 7.1. These details precede the traits identification and scoring process.

Following the observational account, the statistical analysis of the observational data is presented to determine relationships between traits and performance.

Table 7.1 illustrating the cases and professionals observed		
GROUP	PROFESSIONAL	NO. OF OBSERVATIONS
<ul style="list-style-type: none">• Case Study	Briefing consultant <ul style="list-style-type: none">• Independent consultant	10 observations records-meetings- 3 observers
<ul style="list-style-type: none">• Across site	Briefing consultant <ul style="list-style-type: none">• Independent consultants	3 cases- 1 meeting each -1 observer each

In the statistical analysis the results describe the analysis of the relationships between sixteen personality traits of the consultant project manager and performance in the briefing process. The effectiveness of the briefing process was determined by the by the client's account of the extent to which the consultant project manager met their

expectation.

The observations give account of the consultant project manager briefing practice and the traits observed that describe actions. In the process there were three observer recording data. Specifically the observer team was made up of two independent and one peer observers, from the research and consultant teams respectively. A total of four cases were observed, for example, the case study which was studied for over ten months and three other cases across the sector which was independently observed. The overall data analysed was obtained from observing thirteen sessions (ten from the case study and three from observations across the sector) when raw data was collected. These were regarded as the critical information periods.

In the process the observers recorded traits which defined the action of the consultant project manager during the briefing process. This was followed by the observer giving a score to rate the importance of the traits to defining the action of the consultant project manager, thereby enabling overall influence on the briefing process to be evaluated.

The overall data analysed was taken from forty (trait identification and rating sheets) scores. Specifically the forty scores were made up of thirty seven scores recorded by the three observers in the case study and three scores recorded by the single observer who independently observed the consultant project manager in the three other cases. These scores formed the basis for the overall analysis and are depicted in tables 7.2 and 7.3 respectively.

Table 7.2 illustrating the data recorded from the case study		
No of recorded scores	No. of observer/rating	Raw data tally
37	3	37 score sheets

Table 7.3 illustrating the data recorded from the other cases across the sector		
Total No. of meetings	No. of observer/Rating	Raw data
3	1	3 sets of scores

7.1.1 The system of scoring

The system of scoring followed a method of paper based scoring using sheets(table 7.4) and scoring was done by ticking the trait(s) observed at the various stages of the briefing process, believed to define the action(s) of the consultant project manager.

An integral part of the sheet is the sixteen traits listed and frequency of occurrences of each trait was determined initially by summing the number of times each trait was recorded. This was followed by employing the SPSS statistical software to determine the mean, frequency and standard deviation for final verification and determination. This method represents a universal approach of analysing mean, frequency and standard deviation values. Shweder and D'Andrade (1979) recommended the use of this approach to make the process as easy as possible. It ensures accurate values of means, frequencies and standard deviation for different traits can be accurately obtained by using a simple coding scheme. This simple coding scheme can be contrasted easily with more differentiated codes that are used in observation research (Fraser, 2000). Further, it is an effective method that is validated and recommended for use in cases (Matthews, 2003) because of the ease in adaptation to research aims. Likewise it facilitates the rating process at every stage of the briefing process easily.

To the extent the consultant project manager displays traits during the briefing

process, then aggregation of data is expected to increase the reliability of frequency counts and hence will maintain rather than diminish any bias.

It is important to note that this method is not intended to develop personality assessment techniques, but rather to test hypotheses about personality traits and performance, relationships between variables, so that satisfaction and influences can be determined.

In anchoring one set of ratings to another in what can be observed and counted, observation was relatively simple and direct. If we did not have such simple and direct measures, then it would have been difficult to know whether trait influence occurred.

Table 7.4 – An illustration- Trait observation check list matrix sheet

NAME:

SHT NO.

DATE:

EXAMPLE: - OBSERVATION RECORDING AND RATING PROCESS

Trait No.	Description	Data gathering	Brainstorming	Decision-making/communication
1	Assertiveness	11111111		
2	Communication		1111111111	
3	Competence			11111
4	Conceptual ability	11111	11111	
5	Conscientiousness	111111		
6	Consideration			
7	Deliberation		11111	111111
8	Human relations			
9	Ideas(creative thinking)	11111111		111111
10	Office details	11		111111
11	Openness		1111111111	
12	Sales Management-Leadership	111111		11111
13	Self-discipline		1111	
14	Teamwork-KSA		111111	
15	Thrust-Integrity		1111	
16	Value-Humour	1111		1111

7.2 Research question one

This question is related to the consultant project manager briefing practice. This question was answered by observing the consultant project managers briefing practice. Preliminary details of the cases are presented preceding the observational account of the briefing practice in the real world situation

7.2.1 Preliminary details of the cases

The details in this section provide a summary account of each of the cases. Specifically it presents brief details about the organisation business and the basis for the case study in the organisation (table 7.5). This is followed by a summary report on the briefing approaches (table 7.6). Subsequently an outline of the procedures adopted at the time of observation and some comments about the briefing process are presented. The methodological requirements were satisfied by the presentation of the observational account of the cases.

The observational account of the consultant project manager briefing practices was generally intended to give a glimpse of current practices in each case and to gain understanding of what occurs in the real world situation. However it is not intended to be representative of all briefing practices generally.

Specifically the case study, defined as case “A” (table 7.5), was observed for approximately ten months. In cases B, C and D there was one off opportunities available to observe the consultant project managers` practice in each case, as a consequence the data was coalesced with the case study data for analysis.

Base on a commitment to maintain confidentiality and in particular to protect the identity of the organisation, details of the organisation and individuals who were involved in the processes and provided important project detail were kept anonymous.

Therefore there was no linking of any personal details to individual and organisation.

On the basis of the various elements of the study the results are presented in this manner, particularly, because the question of current briefing practice is answered by observing the consultant project manager to be able to compare and evaluate the various approaches and methods adopted by the consultant project managers in the cases

Table 7.5: Details of the organisational cases where briefing practices were observed

Organisation that engaged the CPM	Cases	Type of client business	Projects/Product	Basis of Project
A	Case study	Manufacturing	Generally produces over £7M worth of product annually and constantly involved in new developments	Development project(A new building to house machinery & management staff
B	Other Case - 1	Council	Provide services to the community and generally spends £Ms on new facilities	Feasibility study, establishing requirements and design parameters for a building to provide better services to the community
C	Other Case - 2	Building and construction	Building extensions and spends significantly on bidding and building projects	Establishing requirements and design parameters to fund a new building for business
D	Other Case - 3	Building	Building developer. Generally involved	Establishing requirements and

			in major building projects annually	design parameters to modify existing facility to house restructured business
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Table 7.6 Summary of the consultant project managers briefing approach

Case study	Consultant Project Manager
General approach	<ul style="list-style-type: none"> • Were structured. The case study involved three types of briefs used: strategic brief (for conception), outline brief (for concept design) and detailed brief (brief for project). Whereas the other cases were observed at the strategic stage. • This involved information processing, decision-making and communication of the client requirements into technical specification • All were conducted in workshop settings and the preparation of the final brief for the case study follows a review and sign-off process of the preceding stage in project process. It was the intention of the other cases to do the same
Collecting information	<ul style="list-style-type: none"> • Related to the client core business and technical specification. As the process continues the information requested were more specific.
Comments	<ul style="list-style-type: none"> • A well-defined procedure was adopted which was based on the consultant project manager understanding of the client issues. • The process was interactive where those involved were sharing ideas and communicating the client requirements. Risk issues assessments were conducted also.

7.2.2 The start of the case study project

The client organisation defined as “A” for confidential reasons, is located in the chemical industry. The project was planned to provide a unique facility in keeping with the organisational change process, but more particularly to satisfy increased production demands. It requires the housing of production equipment and management personnel under a single building roof.

The stakeholders of the organisation agreed that the project was unique and considered it to be complex because it had to meet specific health and safety standards (HSE) for approval. On this basis the decision was made to engage an external consultant to conduct the feasibility study and develop the brief. The emphasis therefore was not only development but planning, design and construction, safety, meeting expectation and satisfying requirements. Thus, adding aesthetic value to the organisation to improve workers confidence in the future of the organisation, while serving as a benchmark for future building development was expected to be satisfied. It was therefore conceived as a new charter for the organisation whose in-house experience level was limited.

7.2.3 Engaging the consultant project manager

The consultant project manager was chosen from a list of recommendations provided by another friendly organisation with experience in dealing with specialist consultant’s outfit on similar projects. The dangers in this approach may be the project complexities and the organisation may not be able to determine whether the consultant project manager is ideally suited to handle the complexities of the project, therefore though the consultant project manager may have been successful, the different circumstance may prove difficult. Never the less based on the recommendation, an invitation was sent out inviting the consultancy, while seeking to confirm acceptance of the project. The visit of the consultant and team also sought to raise awareness of the

depth of issues to be undertaken, while seeking to clarify key points relating to;

- The core business and whether the project is the solution to the client organisation project.
- To get the organisation to outline the need for the project.

The discussion followed a prepared one page outline brief document from the organisation which described briefly the project's background, components, and the organisation broad vision. The outline brief advanced the prospect of the project and this included considering the project requirements, for example; what are the physical requirements functions/types of spaces. What other non-physical requirements with regard to quality of light, noise, materials, work considerations and supervision. The design direction, specific project components and dimensions (e.g. to a number of equipment, people under one roof, with space designations and sizes in square metres, and assumable functions meeting specific health and safety requirements).

- Project aims: Clarity of the overall aim was set out and the objectives of the project based on the needs of the organisation were established. The essential tasks were seen as developing a project to achieve a semblance of the specific product in the plant while advancing 'up-to-date construction techniques' in design, construction and operation of the new facility.

In terms of the location of the project within the existing plant functional area, the issues subjected to health and safety regulations were discussed and incorporated as one of the client expectations.

The benefit of placing the project on site was established, for example, developer's involvement, considerable interest shown by project sponsors, and the proximity of the project to warehouse and shipping facility.

The budgetary and funding requirements which were also part of the organisation long

term development plan were also confirmed within the framework of the discussion. Feasibility of the project was discussed. The key issues of project definition and establishing project requirements as they relates to planning agreement and standards were clearly established and verified.

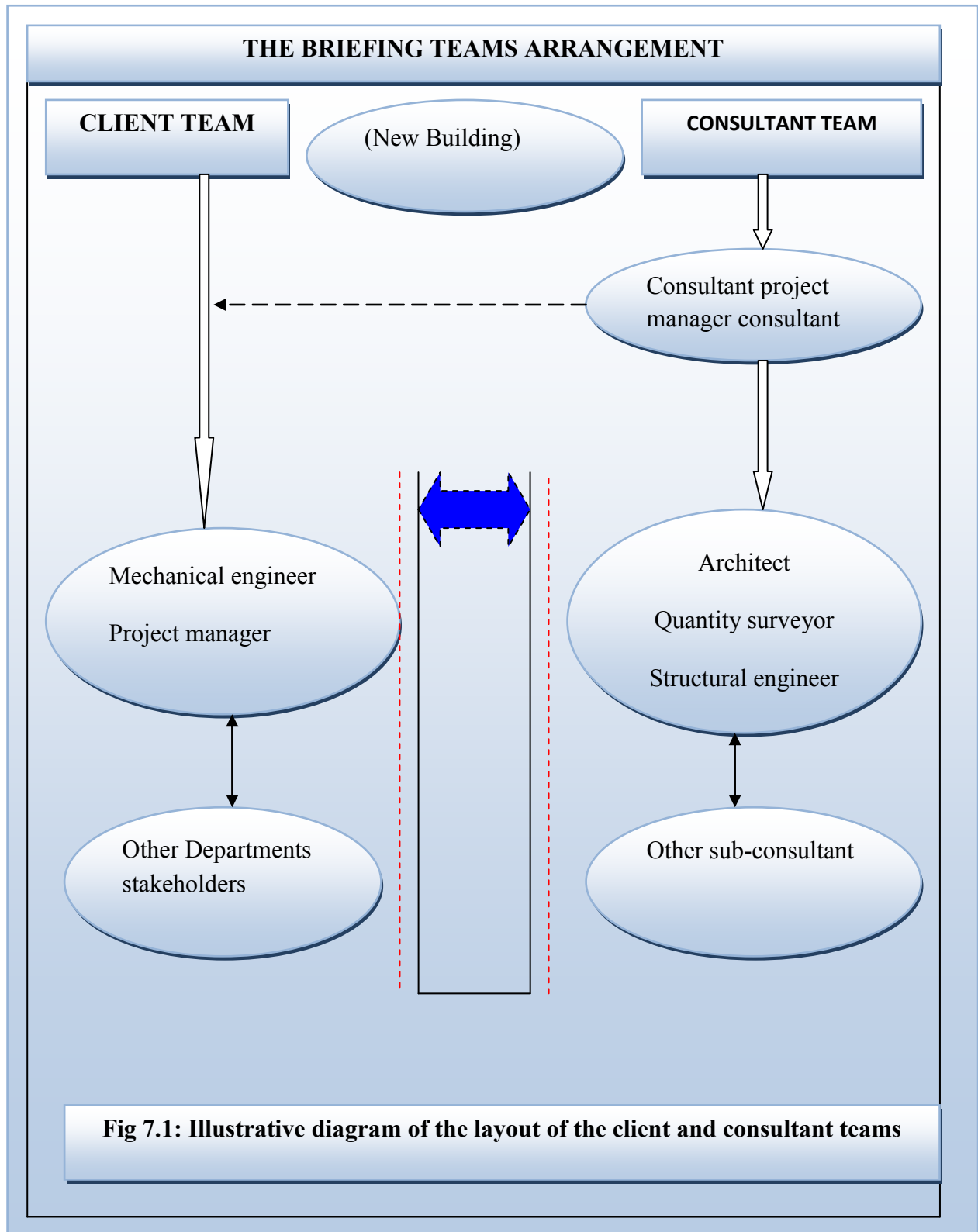
The discussion between the client representatives and consultant, appear to have confirmed a lack of conviction on the part of the organisation to defining the project requirements in detail, although there is the presence of a client an in-house project department. It became clear that the client organisation had lacked the experience with such project type, especially as it relates to integrating different operation under a single facility to meet health and safety standards. Evidently there were occasions when the client representative on the project confirmed that while they dealt with similar project before they were not that confident in handling this project. These comments confirmed the suspicions that it was because of the level of uncertainties in terms of requirements identification that the organisation could not confidently undertake the project.

The consultant outfit was therefore convinced that the organisation lacked the experience and needed assistance to meet the staged objectives apart from having a policy of development. With the understanding that both client requirements identification, safety and operation management were the three most fundamental issues to be resolved, the consultant outfit, being contracted began the process of briefing mainly to understand these three requirements and develop the briefing for the design team.

7.2.4 Participants of the process

A broad mix of professionals was involved in briefing. Representing both client and consultant organisations, these include administrators (managers), architects, development managers, engineers (building services, civil, structural,); planning

supervisors, project managers, and quantity surveyors (QS). To develop good interpersonal relationships and understanding between the client and consultant teams, the key tasks to be undertaken were identified. The consultant project manager was identified to take ownership of the process. His role involved coordinating the process. On the basis of the project requirements the consultant advised the client organisation of the issues involved that requires total involvement and the use of individual strengths based on experience levels. Based on this discussion the structure of teams was established (figure 7.1). The consultant explained the importance of full participation of all stakeholders.



7.2.5 Client Group

The client organisation representatives comprised of individual who are mainly part of the in-house project team. Their designations are shown in table below to indicate role in the process. The senior project manager for internal project was the main client representative (or the project sponsor), who acted as the key link between the consultant and client team.

7.2.6 The consultant group

The consultant team was a multi-disciplinary outfit who evaluated the client issues. The team was comprised of professionals whose designations were:

- Architect
- Briefing consultant (consultant project manager)
- Quantity surveyor
- Structural engineer

The consultant project manager was identified as the specialist and he was responsible for developing and managing the process. Supporting the consultant project manager were other team members who also had experience on previous projects of similar magnitude and complexities. It was noted that the consultant team members had experience considered necessary for conducting the briefing process.

7.3 The briefing process development - Case study

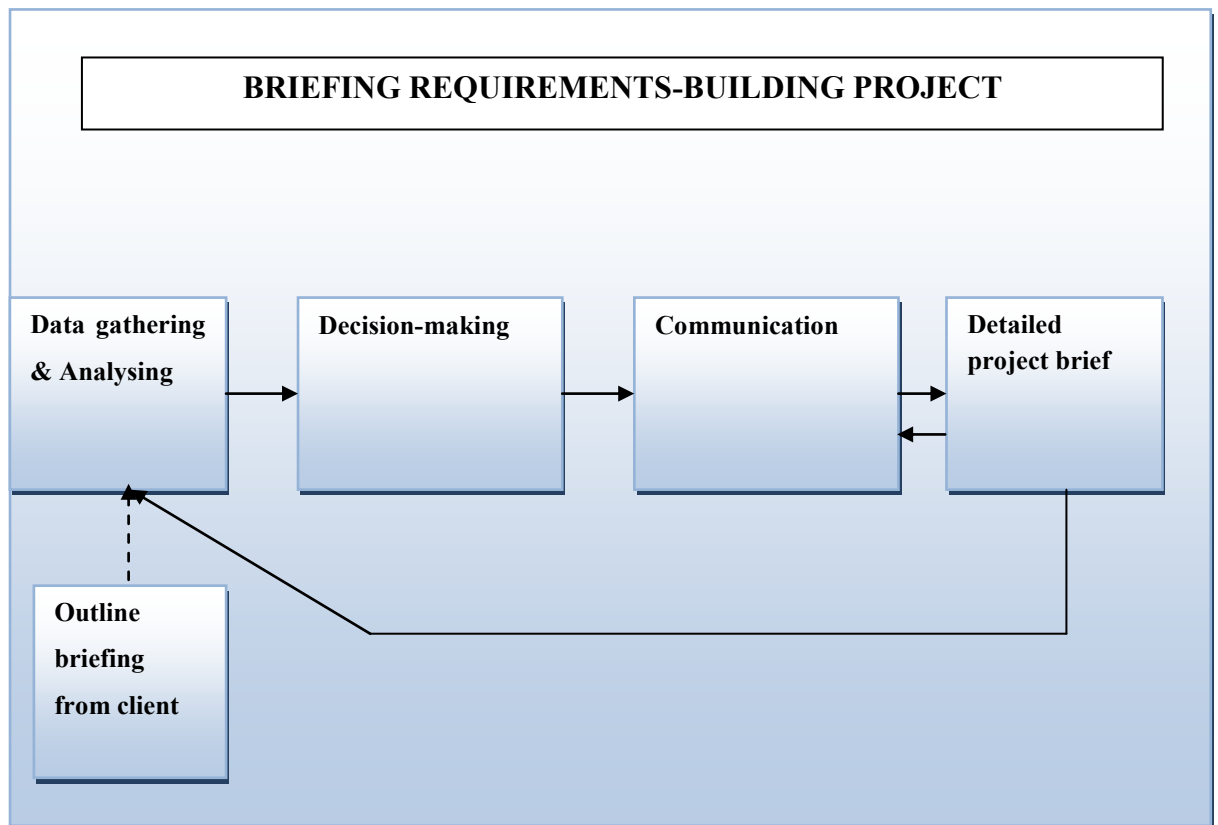


Fig: 7.2 Conceptual map of the tasks performance stages of the briefing process

7.3.1 Project briefing

The actual process began from the time the consultant project manager (consultancy) accepted the project. The formal briefing process started on site in the board room of the client where there were general discussions and reviews of the

outline brief. At the point the client lead representative give a background talk once more of the project. A short presentation was given. This was followed by the lead consultant outlining the expectations of the client. Following this formal session focus was on the project requirements. The issues were broken and over the period of client requirements process the process followed the specific order as follows:

- Arranged meetings for discussions on project issues
- Friendly interactions and exchanging of views
- Re-evaluating, questioning recorded requirements
- Recording project requirements by consensus.
- Sign off documents at key stages

Each day there was a formal review of the issues addressed the previous day and the team continued in this manner to discuss the project and looked at the requirements. It was often repeated that the expectation of the project is the client expectation. Project information was generally requested and the client lead man usually supply what is required where a full and detailed review generally takes place. This process went on for a number of days and general exchanges between stakeholders of the company were two ways. There were pauses for a number of days to allow client to get up further information for the consultant, and in other instances for the client to discuss with stakeholder consultant reports. This resulted in many instances minor changes requested were noted. These deliberations continued for many days, eventually the key requirements noted were formulated and collated on the basis of a series of further meetings with the client and design team. The client was given a draft initial project brief, with specification. This evolved after through collection and documentation of information, processing and analysing the information, decision-making on the issues to be communicated to the client and design team. The project brief was used as 'the base

documentation for the design team.

7.3.2 Data gathering

The team members met and discussed the project issues in a workshop setting where they examined the documents supplied by the client representative. The data were recorded and used on site visits sites. The teams check data against the specifications of the project. These details formed the basis for the documentation process and were kept in vary structured manner for future reference.

7.3.3 Reviewing the information data

The team were constantly discussing and reviewing the information garnered. This involved evaluating sketches and drawings from the client. This process continued on sites visits.

7.3.4 Decision-making

The teams held discussing on the client request in conformity with the correct representation of the client's requirements. Mainly this involved team interacting and illuminating the requirements agreed to satisfy the client issues. There was many times when disagreement surfaced and these were resolved through discussions. The final decisions were generally arrived at through these discussions. The teams discussed introducing valve management techniques.

7.3.5 Communication process

The teams were exchanging ideas in the workshops, through discussing the

client requirements. There were many presentation made from the various work groups where the discussion were centred on coming up with a common set of requirements and project specification. This continued each day the team met over the duration of the project. Several presentations were made when the consultant requested clarification on key project issues. Both teams were involved in discussions, recording details, making presentations and using emails to convey the information necessary.

7.3.6 The briefing process - across site summaries

The three other cases observed, each followed a similar pattern, based on the explanation given. Observation of the consultant and client representatives were conducted when they were involved in workshops discussions, reviewing data from the clients and in each case observed it was at the beginning of the project phase. One of the cases was at the final discussion stage, whereas the two others cases were at the strategic stages. Because of client and consultant issues i was allowed to observe the beginning of the process accompanied by a contact. However in each case the consultant project manager were observed conducting the briefing process (fig 7.2).

7.4 Research questions- two, three, four and five.

The focus of the research is on personality traits of the consultant project manager and influence on performance in the briefing process for delivering an effective process. These questions are therefore related to the relationship between personality traits and effective performance, specifically the influence of personality traits on the effectiveness of the consultant project manager performance for delivering effective briefing, and the personality traits which are best predictors of effectiveness. The research proposition contends the performance of the consultant project manager is influenced personality traits, the pilot study identified sixteen significant traits likely to

contribute to extracting effective briefing. Therefore these questions are answered by establishing relationships between the sixteen traits and effective briefing performance. Since the focus is on influence of the personality traits of the consultant project manager on effective performance the data is analysed using the Pearson product moment correlation coefficient to measure relationships between personality and effective briefing.

7.4.1 The relationship between personality traits (the variables) and effective performance of the consultant project manager - effective briefing

The influence of sixteen personality traits of the consultant project manager on the effectiveness of the briefing process in the case study and three other cases observed is evaluated by statistical analysis and the correlation coefficient derived for each is discussed.

It is important to keep in mind that the effectiveness of the consultant project manager performance in conducting the tasks feature of briefing is indicative of the influence of personality traits on the effectiveness of process. Effectiveness is determined by the extent to which the client is satisfied that his (her) requirements have been accurately identified and defined, meeting their expectation. Correlation coefficients will also measure effectiveness. However the main issues are to establish that there are relationships between each of the traits and effective briefing. If this is true then the correlations between the traits and the independent variables will be related.

7.4.2 Descriptive statistics and personality traits

The data analysed represented forty scores taken from the observations

(observer). They were coalesced and tested for internal consistency (reliability) (table 7.7 below). The value ($r = .871$) is indicative of the accuracy of the data to signify the truth about what the data seeks to prove. This also implies the instruments used for data collection has performed well. Generally coefficient alpha of 0.86 suggests good consistency and reliability. These analyses were performed to ensure that they were no violations of the assumptions of normality.

This process was followed by the analysis of the mean and standard deviations for each of the variables utilised in the research findings and are presented in table 7.8 below. This highlights the traits which are important to influencing the effectiveness of construction briefing. In addition, Appendix G presents the full analysis of the sixteen traits for the cases scored. In the larger analysis, personality traits were used as independent variables and effective briefing, data gathering, analysing, decision-making and communicating the decisions as dependent variable.

Table 7.7 Data (instrument) reliability analysis - Cronbach's α values

Personality Traits	Measured alpha
	Reported alpha
Assertiveness (A)	0.86
Communication(CM)	0.86
Competence (CM)	0.86
Conceptual Ability(CA)	0.86
Conscientiousness(CN)	0.86
Consideration(CS)	0.86
Deliberation(D)	0.86
Human Relation(HR)	0.86
Ideas(I)	0.86
Office Details(OD)	0.86
Openness(O)	0.86
Sales (Management)(SM)	0.86
Self-Discipline(SD)	0.86
Teamwork(TW)	0.86
Trust(Tr)	0.86
Values(V)	0.86
Mean	0.86
No of items 20	

This analysis for reliability (alpha coefficient) determined a coefficient mean value of 0.86 for the sixteen personality traits variables, which indicates the suitability of the instruments and data for evaluation.

Table 7.8 Descriptive statistics for personality traits and briefing

Variables	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
BE	40	1.00	8.00	9.00	8.6250	.49029	.240
A	40	4.00	5.00	9.00	7.1500	1.12204	1.259
CM	40	4.00	5.00	9.00	6.7000	1.09075	1.190
CP	40	3.00	6.00	9.00	7.1750	.95776	.917
CA	40	8.00	.00	8.00	3.8000	2.35557	5.549
CN	40	8.00	.00	8.00	3.1500	2.54750	6.490
CS	40	5.00	4.00	9.00	7.2750	1.06187	1.128
D	40	9.00	.00	9.00	2.6750	3.42979	11.763
HR	40	9.00	.00	9.00	6.5250	2.48057	6.153
I	40	9.00	.00	9.00	2.5000	3.52282	12.410
OD	40	8.00	.00	8.00	2.7500	3.31082	10.962
O	40	5.00	4.00	9.00	6.9750	.97369	.948
SM	40	9.00	.00	9.00	6.6000	2.20489	4.862
SD	40	4.00	5.00	9.00	7.2750	1.10911	1.230
TW	40	9.00	.00	9.00	4.2000	3.74987	14.062
TR	40	8.00	.00	8.00	3.1250	3.39069	11.497
V	40	8.00	.00	8.00	3.1000	3.55037	12.605
Valid N (listwise)	40						

Note: For the number of cases refer to table 7.3.

7.4.3 The relationships between personality variables and effective briefing

The relationships between effective briefing and three tasks performance variables of briefing were analysed using the Pearson product-moment coefficient (table 7.9). Analysis of the scores in table 7.10 shows the correlations between effective briefing and the sixteen personality variables. These were also investigated using the Pearson product-moment co-efficient method. The response from each analysis (inter) is indicative of the likely course of action to be taken resulting from the dominant personality trait type. This is particularly true where respondent's relationships are

ideally supported and when the relationships are significant. The logic is when a relationship is established the likelihood is, influence is exerted and effective outcomes may be true.

Fink (1995) contends that a conservative rule of thumb suggests if r is 0 to + .25 (or - .25) = little or no relationship; +.26 to +.50 (or -.26 to -.50) = Fair degree of relationships; +.51 to +.75 = (or -.51 to -.75) = moderate to good relationship; over +.75 (or -.75) = very good to excellent relationship. On the other hand Cohen (1992), noted an effective size is small if $r = 0.10$, medium if $r = 0.30$ and large if $r = 0.50$.

Further, to present the analysis of the correlation, recognising the sample, the influence of the sixteen personality dimensions on effective briefing is discussed separately below. It is important to keep in mind that there are many other variables, which may influence the effectiveness of the briefing process but which fall outside the scope of this research. The nature of the relationships is also of key importance.

Table 7.9 Correlations between briefing effectiveness and briefing performance tasks variables

Variables		BE	DGAS	DC	DM
BE	Pearson Correlation	1	-.371*	-.457**	-.310
	Sig. (2-tailed)		.019	.003	.052
	N	40	40	40	40
DGAS	Pearson Correlation	-.371*	1	.375*	.424**
	Sig. (2-tailed)	.019		.017	.006
	N	40	40	40	40

DC	Pearson Correlation	-.457**	.375*	1	.252
	Sig. (2-tailed)	.003	.017		.117
	N	40	40	40	40
DM	Pearson Correlation	-.310	.424**	.252	1
	Sig. (2-tailed)	.052	.006	.117	
	N	40	40	40	40

*. Correlation is significant at the 0.05 level (2-tailed). (p<0.05)

**. Correlation is significant at the 0.01 level (2-tailed).(p<0.01)

These correlations corresponds to the tasks variables, namely, data gathering, analysing, synthesising, and decision making and communication. The proposition proposes that the effectiveness of the briefing process is related to these task variables. In other words if the correct data is collected and analysed properly then the likely there are relationships.

In this matrix, the analysis indicates a significant (negative) correlation established between briefing effectiveness and data gathering, analysing and synthesising (BE- DGAS) $\{r = -.371^*, p < 0.05\}$. This suggests 13.76% of the variances in observers' scores on briefing effectiveness are explained by data gathering, analysing and synthesising. A statistically significant relationship was found between the two variables. The proposition was significantly supported. In other words, it seems as though the effectiveness of the briefing process and the data gathered for analysing and decision-making are so related that there is a reliance of one on the other. In general negative correlation relationships exist either way and the likely outcome is generally positive.

Also a significantly negative correlation was observed between effective briefing and decision-communication (BE-DC) $\{r = -.457^{**}, p < 0.01\}$. This suggests that 20% of the variances in observers' scores on effective briefing are explained by the decisions communicated. A statistically significant relationship was found between effective briefing and the data gathering and analysing process. The proposition was therefore supported.

Further, a small negative correlation was observed between effective briefing and decision making (BE-DM) $\{r -.310, p < 0.05\}$. This suggests that 9.6% of the variances in observers' scores on effective briefing are explained by the decision-making process. A statistically significant relationship was not found between effective briefing and decision-making. These findings offer partial support for the proposition, that effective briefing will be positively supported by decision making.

7.5 The relationships between effective briefing and sixteen dimensions of the consultant project manager personality traits- Correlation matrix.

Table 7.10 Correlation(inter) between personality traits and effective briefing

Consultant project manager personality traits and effective briefing																	
Variables	BE	A	CM	CP	CA	CN	CS	D	HR	I	OD	O	SM	SD	TW	TR	V
BE	1	-.548**	-.455**	-.013	-.400**	-.652**	-.486**	-.654**	-.340**	-.0275	-.533**	0.034	-.0213	-.023	-.474**	-.696**	-.773**
A	-.548**	1	0.184	-0.07	.497**	.548**	0.244	.346*	0.082	0.208	0.252	-0.208	0.16	0.296	0.249	.366*	.453**
CM	-.455**	0.184	1	0.101	.325*	.395*	0.206	.357*	.353*	0.073	.334*	0.162	-0.041	0.07	.322*	.399*	.498**
CP	-.013	-0.073	0.101	1	0.152	0.157	0.204	.330*	.381*	0.293	0.055	.417**	0.107	0.291	0.133	0.246	0.206
CA	-.400**	.497**	.325*	0.152	1	.484**	0.238	0.265	0.229	.504**	.388*	0.087	0.167	.336*	.414**	.315*	.389*
CN	-.652**	.548**	.395*	0.157	.484**	1	.345*	.549**	.320*	0.3	.488**	0.074	0.239	.484**	.445**	.553**	.656**
CS	-.486**	0.244	0.206	0.204	0.238	.345*	1	.469**	.450**	.339*	.319*	0.131	.727**	.370*	0.282	0.247	0.231
D	-.654**	.346*	.357*	.330*	0.265	.549**	.469**	1	.449**	.500**	.668**	0.182	.440**	.422**	.362*	.579**	.519**
HR	-.340**	0.082	.353*	.381*	0.229	.320*	.450**	.449**	1	0.263	0.304	0.186	0.283	0.133	.380*	.373*	.387*
I	-.0275	0.208	0.073	0.293	.504**	0.3	.339*	.500**	0.263	1	.534**	0.221	.399*	.476**	0.301	0.222	0.158
OD	-.533**	0.252	.334*	0.055	.388*	.488**	.319*	.668**	0.304	.534**	1	0.038	.411**	0.25	0.182	0.3	.373*
O	0.034	-0.208	0.162	.417**	0.087	0.074	0.131	0.182	0.186	0.221	0.038	1	0.079	0.244	0.135	0.234	0.119
SM	-.0213	0.16	-0.04	0.107	0.167	0.239	.727**	.440**	0.283	.399*	.411**	0.079	1	.403*	0.202	0.075	0.107
SD	-.023	0.296	0.07	0.291	.336*	.484**	.370*	.422**	0.133	.476**	0.25	0.244	.403*	1	.319*	.366*	.331*
TW	-.474**	0.249	.322*	0.133	.414**	.445**	0.282	.362*	.380*	0.301	0.182	0.135	0.202	.319*	1	.686**	.644**
TR	-.696**	.366*	.399*	0.246	.315*	.553**	0.247	.579**	.373*	0.222	0.3	0.234	0.075	.366*	.686**	1	.904**
V	-.773**	.453**	.498**	0.206	.389*	.656**	0.231	.519**	.387*	0.158	.373*	0.119	0.107	.331*	.644**	.904**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The analysis of the scores of the sixteen traits produced the following results from the various correlations:

7.5.1 Correlations between briefing effectiveness and assertiveness

From the analysis above (table 7.10) the following picture emerged. There is established a proven relationship between assertiveness and effective briefing. A significant negative correlation was observed between effective briefing and assertiveness (BE-A) $\{r = -.548^{**}, p < 0.01\}$. This also suggests that 20% of the variances in observer's scores on briefing effectiveness are explained by assertiveness. Statistically a significant relationship was found between effective briefing and assertiveness. In finding a significant relationship between the components the research corroborates previous research that suggests that individuals who are assertive are generally associated with effective decision-making (Atalah 2009). However his findings indicated $r = 0.44$ which was not prove to be as strong as the research findings may be due to many reasons. For example this difference may be due to the sample population and the instruments used. Essentially it is also likely therefore that since construction briefing relies on effective decision-making then the consultant project manager who is assertive is likely to be associated with delivering effective briefing outcomes.

7.5.2 Correlations between effective briefing and communication

The picture which emerges from the analysis above (table 7.10) shows that there was a significant negative correlation was observed between effective briefing and communication (BE-CM) $\{r = -.455^{**}, p < 0.01\}$. This means that there is an established relationship between effective briefing and communication. There is a slight differences in the findings with that of Atalah(2009), who found $r = 0.32$. This may be due to the method of analysis which was different. This finding also corroborates with research that suggests effective communication is related to effective briefing outcomes (Yu et al. 2006). This also suggests that 20% of the variances in observer's scores on briefing effectiveness are explained by communication. A statistically significant relationship

was found between effective briefing and communication, which means also the statistical relationship, is sound. The construction briefing process involves communication and an outstanding communicator is able to get the message across to all stakeholders. With project complexities varying owing to a number of reasons including on size and amount of information, it stands that effective communication is an essential contributor to delivering effective outcomes.

7.5.3 Correlations between effective briefing and competence

The picture which emerges from the analysis (table 7.10) above indicates that a small negative correlation was observed between effective briefing and competence (BE-CP) $\{r = -.130, p < 0.05\}$. It proves that a relationship exists between the two variables and that 1.69% of the variance in observers scores on effective briefing is explained by competence. Though a statistically significant relationship was not found between effective briefing and competence the results also offer partial support to the proposition that effective briefing will be positively related to competence. It varies somewhat from other studies such as Atalah(2009) who shows a correlation of $(r = 0.008)$ which indicate a low level of relationship, never a positive one. Application of competence to job situation can be interpreted to mean an individual sense and ability to deliver tasks successfully. On these bases the client engages the consultant project manager for the briefing process with the expectation of success. This findings offers support that competence is related to effectiveness in construction project roles.

7.5.4 Correlations between effective briefing and conceptual ability

From the analysis above (table 7.10) it is shown there is a strong but significantly negative correlation between effective briefing and conceptual ability (BE-CA) $\{r = -.400^*, p < 0.05\}$. This correlation proves that a relationship exist between the

two variables. It also suggests that 16% of the variances in observer's scores on briefing effectiveness are explained by conceptual ability. In other word there is a statistically significant relationship found between effective briefing and conceptual ability. These finding offers support to the proposition that effective briefing is related to conceptual ability and corroborates with the research of Atalah(2009)($r = 0.37$) that there are relationships between conceptual ability and performance and on the basis that the briefing process involves significantly decision making in term of defining the client requirements then it hold that conceptual ability is likely to impact on the performance of the consultant project manager. The difference in values is due to the difference in analysis.

7.5.5 Correlations between effective briefing and conscientiousness

The above analysis (table 7.10) shows that there is a significant negative correlation observed between effective briefing and conscientiousness (BE-CN) { $r = -.652^{**}$, $p < 0.01$ }. It is proven that there is a relationship which exist between the two variables. The results varies from Atalah(2009)($r = 0.19$) but this may be due to the analytical approach and the instruments used for data collection. Never the less both studies establish relationships in that conscientiousness is related to good relationships with team members, effective performance and demonstrates good common sense. The findings also suggest that 42% of the variances in observer's scores on briefing effectiveness be explained by conscientiousness. Since a statistically significant relationship was found between effective briefing and conscientiousness, then it stands that these finding offer strong supports to the proposition that effective briefing is related to consciousness. Briefing involves having a conscious awareness of the client issues, and then it is likely that the conscientiousness consultant project manager is likely to be influenced positively in the briefing process.

7.5.6 Correlations between effective briefing and consideration

From the analysis above (table 7.10) it emerges from the analysis that a significant (negative) correlation was observed between effective briefing and consideration (BE-CS) $\{r = -.486^{**}, p < 0.01\}$. This findings proves that there is a relationship between the variables. It also suggests that 24% of the variances in observer's scores on briefing effectiveness are explained by consideration. This findings is somewhat similar to that of Atalah(2009) ($r = 0.29$) the differences may be due to the analytical method used. Similarly the negative correlation suggests an inverse relationship. Since a statistically significant relationship was found between effective briefing and consideration, then this offers strong support to the proposition that effective briefing is related to consideration. Atalah(2009) found that consideration to be related to willingness and effective outcomes. It therefore stands that the consultant project manager with consideration is likely to deliver an effective briefing process.

7.5.7 Correlations between effective briefing and deliberations

From the analysis above (table 7.10) it is found that a significant negative correlation was observed between effective briefing and deliberation (BE-D) $\{r = -.654^{**}, p < 0.01\}$. This proves that there is a strong relationship between the two variables, and also indicates that 43% of the variances in observer's scores on briefing effectiveness be explained by deliberations. This findings is different from that of Atalah(2009) ($r = 0.29$) but this difference could be to a number of reasons, one he studies the construction management professional and used different analysis method. Research has shown that a person who deliberates is generally careful in his approach to work. This statistically significant relationship found between effective briefing and deliberations also suggests an association with the tendency to think carefully before acting. The findings of the strong association offer significant support to the proposition that effective briefing is related to deliberations.

7.5.8 Correlation between effective briefing and human relations

From the analysis above (table 7.10) the picture that emerges shows that there is a significant negative correlation was observed between effective briefing and human relations (BE-HR) $\{r = -.340^*, p < 0.05\}$. The analysis proves that a relationship exists between effective briefing and human relations. Human relations- the ability to relate to others was related to exceptional performance (Hartman, 2008). Such significant relation also suggests that human relations explain 12% of the variances in observer's scores on briefing effectiveness. In Atalah(2009) research he found correlation vale to be $(r = 0.19)$ which also proves a relationships exist. The variation in numbers could have been to a number of reasons, one being the nature and analysis of the two studies. However the connections suggest that the statistically significant relationship found between effective briefing and human relations is an indication that barriers can be overcome if the individual is capable of relating to others. It therefore suggests at these findings offer strong supports to the proposition that effective briefing is related to human relations.

7.5.9 Correlations between effective briefing and ideas

From the above analysis (table 7.10) the following picture emerges. There is a small negative correlation observed between effective briefing and ideas (BE-I) $\{r = -.275, p < 0.05\}$. This correlation confirms that there are relationships between the two variables and further it suggests that 7.6% of the variance in observer's scores on effective briefing is explained by ideas. Other studies have found correlation to be $(r = 0.14)$ which could have been as a result of the studies and analysis. However though statistically significant correlation was not found between effective briefing and ideas, these findings also offer support to the proposition that effective briefing will be positively related to ideas.

7.5.10 Correlations between effective briefing and office details

From the above analysis (table 7.10) a significant negative correlation was observed between effective briefing and office details (BE-OD) $\{r = -.533^{**}, p < 0.01\}$. This proves that there exists a relationship between the two variables; this suggests that that 28% of the variances in observer's scores on briefing effectiveness are explained by office details. Statistically the significant relationship found between effective briefing and office details offers strong support to the proposition that effective briefing is related to office details. Other studies have found such relationships though less strong ($r = 0.55$) but these may be due to the nature of the studies and analytical method used.

7.5.11 Correlations between effective briefing and openness

From the analysis above (table 7.10) it is shown that there was a small positive correlation briefing effectiveness and openness (BE-O) $\{r = .030, p < 0.05\}$. This proves that there exist a relationship between the two variables, and further that 0.10% of the variance in observers' scores on briefing effectiveness is explained by openness. Statistically a significant relationship was not found between briefing effectiveness and openness, but it is does not vary much with the finding of other studies that also show small but positive relationships ($r = 0.03$; $r = .02$) (Steward et al. 2008; Heinstrom 2003) but this may be due to the nature and analytical approach. However these findings offer support for the proposition that briefing effectiveness is positively related to openness.

7.5.12 Correlations between effective briefing and management

From above analysis (table 7.10) it is shown that there was a small negative correlation briefing effectiveness and sales-management (BE-SM) $\{r = -.213, p < 0.05\}$. These findings prove that there exists a relationship between the two variables. Further

this suggests that 5% of the variance in observers' scores on briefing effectiveness is explained by sales-management. This findings varies somewhat from other studies in the strength of the relationships ($r = 0.19$) (Atalah 2009) but this may be due to the nature and analytical method applied.

Though a statistically significant relationship was not found between briefing effectiveness and openness these findings never the less offer support for the proposition that briefing effectiveness is positively related to sales management.

7.5.13 Correlations between effective briefing and self-discipline

The analysis above (table 7.10) shows that there was a small negative correlation briefing effectiveness and self-discipline (BE-SD) $\{r = -.230, p < 0.05\}$. This finding proves that there exists a relationship between the two variables. Further this suggests that 5.3% of the variance in observers' scores on briefing effectiveness is explained by self-discipline. This findings varies somewhat from other studies, for example ($r = 0.12$) but this may be due to the nature and method used for the analysis. Though a statistically significant relationship was not found between briefing effectiveness and self-discipline, these findings offer partial support for the proposition that briefing effectiveness is positively related to self-discipline.

7.5.14 Correlations between effective briefing and team work

From the analysis above (table 7.10) emerges a significant negative correlation between effective briefing and teamwork (BE-TW) $\{r = -.474^{**}, p < 0.01\}$. The findings prove that there is a relationship between the two variables and further, 22% of the variances in observer's scores on briefing effectiveness are explained by teamwork. Though a statistically significant relationship was found between effective briefing and

teamwork, these findings offer strong support to the proposition that effective briefing is related to team work.

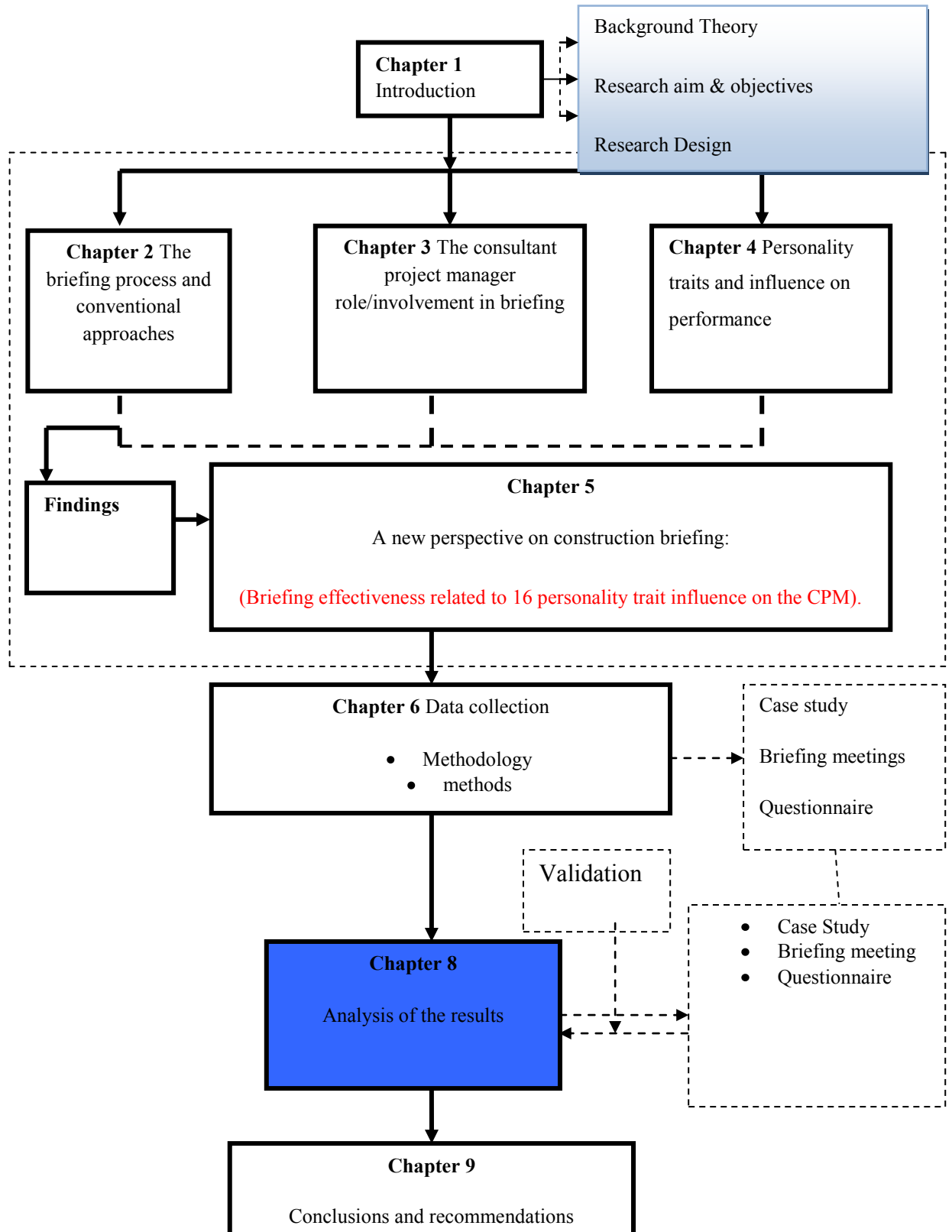
7.5.15 Correlations between effective briefing and trust

From the analysis above (table 7.10) it is shown that a significant negative correlation was observed between effective briefing and teamwork (BE-TR) $\{r = -.696^{**}, p < 0.01\}$. This finding proves that there is a relationship between the two variables. The finding is similar to the findings of some other studies which show relations ($r = 0.77$ range) (Atalah 2009; Carr 2004). It further suggests that 48% of the variances in observer's scores on briefing effectiveness are explained by trust. This is significant as a statistically significant relationship was found between effective briefing and trust. These finding offers strong support to the proposition that effective briefing is related to trust.

7.5.16 Correlations between effective briefing and values

From the analysis above (table 7.10) a significant negative correlation was observed between effective briefing and value (BE-V) $\{r = -.773^{**}, p < 0.01\}$. This proves that there exists a relationship between the two variables. Further this suggests that 60% of the variances in observer's scores on briefing effectiveness are explained by values. This results is within the range of other studies that evaluated construction management professionals ($r = -.97$). In addition a statistically significant relationship was found between effective briefing and values. These finding offer strong supports to the proposition that the stronger the relationship more it supports effective briefing and these values are related.

Chapter 8 Analysis of Results, part 2 – Questionnaire survey



8.1 Introduction

The chapter presents a descriptive and statistical analyse of the results obtained from the industry wide research (survey) data. This is the second part of the empirical study. The first research question is answered in the first three sections of the questionnaire survey (A, B &C) which are inter-related and address the descriptive aspect of the research. The second and third research questions are answered by Section D evaluation, which addresses the statistical aspect of the analysis. The results are organised in this manner because the questions in sections A, B, and C are answered by the data related to the respondent's background and the principles guiding their briefing approach. In the first three sections the respondents were asked to respond to a number of variables which inform of their general approach to construction briefing. In section D the questions are related to the consultant project manager traits which influence his or her performance, as a consequence their opinions were sought. This is the important stage which provides the answers to the key questions which seek an understanding of the relationship between the consultant project manager personality traits and performance in the briefing process. This stage therefore focuses the analysis on the key issues which underpins the relationships between personality traits and effective construction briefing.

8.2 Research questions- Sections A, B &C

These questions are related to section A, B & C to satisfy the background details, understanding and perspective of construction briefing of respondents relating to client briefing requirements and expectations.

8.2.1 Questionnaires sent out and responses

The breakdown of the overall response at the cut-off point is presented in table 8.1. There were one hundred and fifty (150) responses (from respondents) totalling 54 % and these were completed adequately for inclusion within the study. There were instances where respondents did not adequately complete the questionnaire, as such there were missing information, such as briefing effectiveness. These issues were verified and corrected by contacting the respondents by phone, allowing the information to be added to the data base. The response rate of 54% was achieved because of many follow up calls to respondents. This is despite the fact that there were instances where follow up call were made and responses were untimely. In these cases the reasons given for late or non-responses were generally, we are extremely busy but will try our best to cooperate, and this impacted on the overall response rate. All the questionnaires were completed by consultant project managers either working for consultancies or as business consultants, managing their own business, for example project management.

The research considered timely responses to the questions generated from the literature, and area of business. It was therefore appropriate to have four sections to provide answers to the questions. This enabled an informed view and up to date understanding of current industry practices, trait association and influences to be had such that it enabled analysis to be made.

Table 8.1 Summary of questionnaires sent out and responses

Category	Questionnaires issued	Responses	% Responses
Consultants	278	150	54

NB: This table was designed to indicate total response from the sample population

Table 8.2 provides a breakdown of the respondents by organisations and percentages, as it is discerned that 115 (76.7%) were working for a project management consultancy, 7 (4.7%) were consultant manager 20(13.3%) from construction & Surveying consultancy, 2 (1.3%) from facilities management and 6(4%) others.

Table 8.2 Category of respondents (breakdown) by organisations

		Consultancy Type			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Project management	115	76.7	76.7	76.7
	Consultant Manager	7	4.7	4.7	81.3
	Construction & Surveying	20	13.3	13.3	94.7
	Facilities Management	2	1.3	1.3	96.0
	Other	6	4.0	4.0	100.0
	Total	150	100.0	100.0	

The picture which emerged from table 8.3 shows that in the organisations respondents held various positions, for example 117(78%) are project managers, 9(6%) contracts manager, 4(2.7%) project co-ordinator, 20(13.3%). It indicates

Table 8.3 Respondents position by category in the organisations

Position in Organisation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Project manager	117	78.0	78.0	78.0
	Contract Manager	9	6.0	6.0	84.0
	Project co-ordinator	4	2.7	2.7	86.7
	other	20	13.3	13.3	100.0
	Total	150	100.0	100.0	

From assessing the responses most of the respondents are consultants(project managers) who came from a cross section of the sector, with various levels of experience in briefing, for example, 96 (64%) are from the private sector, 49 (32.7%) from the public sector and 5 (3.3%) categorised others.

Table 8.4 Respondents experience**Years' experience in coordinated briefing**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid one year experience	18	12.0	12.0	12.0
2-4 years	91	60.7	60.7	72.7
5 and over	41	27.3	27.3	100.0
Total	150	100.0	100.0	

From the analysis, the emerging picture (table 8.4) shows varying levels of experience among respondents, for example 91 (60.7%) of the respondents have between 2 and 4 years briefing experience, 41 (27.3%) with five years and over experience and 18(12%) with one year experience. Also there are of different age groups involved, for example, 108 (72%) were within the age group of 31-50, 36(24%) 51-65, 4(2.7) between 18-30 and 2(1.3%) over 66 years (table 8.5).

Table 8.5 Respondents age grouping

Age of respondent					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-30	4	2.7	2.7	2.7
	31-50	108	72.0	72.0	74.7
	51-65	36	24.0	24.0	98.7
	66 and over	2	1.3	1.3	100.0
	Total	150	100.0	100.0	

Essentially, among the 150 respondents, 80% felt that the construction briefing process recognises the distinction between the strategic brief as the mission of the project within the client` core business and the project brief as the technical requirements of the project. Respondents mainly employed the workshop arrangement and utilised the full functional specification to convey the client requirements to the design team. Interestingly 75% had no established way of conducting the briefing and generally develops an approach to suit the needs of every project. This is suggesting that their approach is indicative of a personal undertaking based on their understanding of the client requirements, and these are not significantly altered for the duration of the process. This appears to suggest the desire of individualistic approach to construction briefing.

Respondents strongly agree that personality traits influence the briefing process

(decision-making). Table 8.6 below provides a self-assessment report of the consultant project manager perception, having discussed the outcome with the client, the extent to the briefing process accurately identify the project requirements to the satisfaction of the client, thereby deeming the briefing process effective. It shows 35(98%) believed they satisfied the client requirements well, 81(74.7%) felt they satisfied the client requirements quite well, and 35(20%) more than satisfy. Overall this is a significant percentage of the consultant project managers whose briefing practice met the client requirements, and satisfy expectation effectively. The consultant project manager's had more experience in construction briefing then the other profession.

Table 8.6 Briefing process was effective (BE)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid insufficient	2	1.3	1.3	1.3
sufficient	4	2.7	2.7	4.0
more than sufficient	25	16.7	16.7	20.7
quite well	81	54.0	54.0	74.7
well	35	23.3	23.3	98.0
very well	3	2.0	2.0	100.0
Total	150	100.0	100.0	

8.3 Research question - Section D

8.3.1 Research questions two, three four and five

These questions are related to the relationships between personality traits (variables) and effective construction briefing. The questions were designed to get the views of respondents as they relate to the traits which define their action and believed to influence performance in the briefing process.

The research proposition contends the consultant project manager briefing performance is influenced by personality traits and those who possess these traits are likely to extract effective construction briefing. In the empirical studies all these questions are answered by establishing relationships between the variables (personality traits and performance). The data was analysed using the Pearson-moment coefficient method to determine relationships between personality and effective briefing.

8.3.2 The relationship between personality variables and CPM briefing performance

As this aspect focused on the influence of sixteen personality traits on the consultant project manager performance in the briefing process, the first step sought to establish that there are relationships between the two sets of variables. Once more, if this is true then the correlations (analysis) will show relationships. Secondly the influence of the sixteen personality trait dimension on effective briefing is explored by correlating each trait dimension with effective briefing to establish relationships.

8.3.3 Descriptive statistics and personality traits

After coalescing the data received from the respondents it was tested for internal consistency (table 8.7). Internal consistency values of coefficient alpha between 0.70 and

above are deemed within the range of acceptability and suggest good consistency and reliability (Litwin 1995). From the analysis the mean value($r = .75$) is indicative of internal consistency and therefore suggests the data is reliable. It also signifies the accuracy of the data to tell the truth about what the data seeks to prove, and also implies the instruments used for data collection has performed well. These analyses were also performed to ensure no violations of the assumptions of normality.

In the case study analysis, the mean and standard deviation for each of the variables utilised in the analysis of the research findings are presented in table (table 8.8). This result highlights the traits which are important to influencing the effectiveness of construction briefing. In addition, Appendix G presents the full analysis of the sixteen traits for the research questionnaire survey. Again for the larger analysis, personality traits were used as independent variables and effective briefing as the dependent variable.

Table 8.7 Data (instrument) reliability analysis - Cronbach's alpha values

Personality Traits	Measured alpha
	Reported alpha
Assertiveness(A)	0.75
Communication(CM)	0.75
Competence(CP)	0.75
Conceptual Ability(CA)	0.75
Conscientiousness(CN)	0.75
Consideration(CS)	0.75
Deliberation(D)	0.75
Human Relation(HR)	0.75
Ideas(I)	0.75
Office Details(OD)	0.75
Openness(O)	0.75
Sales (Management)(SM)	0.75
Self-Discipline(SD)	0.75
Teamwork(TW)	0.75
Trust(Tr)	0.75
Values(V)	0.75
Mean	0.75

The analysis for reliability (alpha coefficient) determined a coefficient mean value of 0.75 for the sixteen personality traits variables, which is indicative of the suitability of the instruments and data for evaluation.

Table 8.8 Descriptive statistics for personality and briefing

Variables	N	Range	Minimum	Maximum	Mean	Std. Deviation
BE	150	6.00	4.00	10.00	8.0000	.89742
A	150	9.00	.00	9.00	7.6267	1.64070
CM	150	7.00	3.00	10.00	8.4733	.80848
CP	150	10.00	.00	10.00	8.5667	.94419
CA	150	10.00	.00	10.00	7.5133	2.66405
CN	150	10.00	.00	10.00	8.5000	.98819
CS	150	10.00	.00	10.00	7.5800	1.57697
D	150	10.00	.00	10.00	8.1867	1.18936
HR	150	10.00	.00	10.00	6.0800	1.88786
I	150	10.00	.00	10.00	8.2000	1.42367
OD	150	9.00	.00	9.00	6.3000	1.86364
O	150	10.00	.00	10.00	7.3867	1.64168
SD	150	10.00	.00	10.00	6.2200	2.09464
TW	150	10.00	.00	10.00	7.7400	1.91928
TR	150	9.00	.00	9.00	6.3400	1.77919
V	150	10.00	.00	10.00	5.7533	2.11081
Valid N (list wise)	150					

The correlations between the dependent and independent utilised in the analysis of the research represent 150 respondent's sample. This highlights the traits which are important to influencing the effectiveness of construction briefing.

The picture which emerges show the relationships (or inter-correlations) between the independent (16 traits) and dependent (briefing performance) are largely related and there are significant correlations between effective briefing and consideration($r = 0.242^{**}$, $p < 0.01$), effective briefing and human relations($r = -.186^{*}$, $p < 0.05$), effective briefing and openness($r = 0.164^{*}$, $p < 0.05$), effective briefing and management($r = -.168^{*}$, $p < 0.05$) and effective briefing and self-discipline($r = -.175^{*}$, $p < 0.05$). The analysis also shows those respondents who indicated briefing was effective also felt that

the traits are significantly important for delivering effective briefing.

These findings are similar to those of those of Atalah (2009) and Hartman (2008) who evaluated the impact of personality traits of the construction management professionals and found that the personality traits of construction management professionals are inter-related with performance. These findings (inter-correlation) also support the theories of Barrick and Mount (1991) which suggest relationships between personality traits and performance in job situations.

The core issues of the research proposition being correlations between the independent variables (16 personality traits dimension) and the dependent variable (effective briefing performance) exhibit several significant relationships. The consequences therefore are, individuals who possess these traits are likely to performance effectively and should be able to extract effective briefs. Further these outcomes are consistent with prior research studies that demonstrate, for example; effective performance is positively correlated with openness to experience (Barrick and Mount 1991; McCrae and Costa 1989). It is also found in the correlations that openness to ideas is positively related to performance (Costa 1996). This prediction of ideas and openness to performance are related to the consultant project manager performance in the briefing phase.

8.4 The relationships between effective briefing and sixteen dimensions of the CPM personality traits- Correlation matrix

The basic premise of the research theory is that there are sixteen personality traits of the consultant project manager which influence (his/her) performance in construction briefing. The theory suggests that the consultant project managers with these traits are likely to extract effective construction brief. The correlation coefficients establish relationships between these traits and effective performance to suggest influence on performance. The data analysed have been once more subjected to

Pearson-moment coefficient analysis to confirm the relationships between each personality and effective briefing.

The respondent's data used to measure relationships are recommended to support the research proposition. It is suggested that each individual response is indicative of the course of action resulting from the dominant personality traits type. This is particularly true where respondent's relationships are ideally supported when the relationships are significant. As noted earlier, the logic is when a relationship is established the likelihood of effective outcomes may be true. Therefore to increase the power of the analysis, recognising the sample, the influence of the sixteen personality dimensions on effective briefing is explored independently to establish relationships. The correlated relationships summarised in the matrix (table 8.9) is discussed individually below.

Table 8.9 Correlation (inter) between personality traits and effective briefing

Consultant project manager personality traits and effective briefing																	
Variables	BE	A	CM	CP	CA	CN	CS	D	HR	I	OD	O	SM	SD	TW	TR	V
BE	1	0.064	-0.037	0.024	0.003	0.038	.242**	0.094	-.186*	0.011	-0.028	.164	-.168	-.175	0.058	-0.034	-0.064
A	0.064	1	.336**	0.016	-0.026	.319**	0.032	.194	0.14	.509**	.267**	.525**	0.129	-0.128	.457**	.193	.177
CM	-0.037	.336**	1	.262**	0.02	.197*	0.031	-0.079	.309**	.325**	.172*	.251**	.284**	-0.002	.365**	0.149	.254**
CP	0.024	0.016	.262**	1	0.068	0.032	-0.069	0.096	0.061	.200*	.166*	0.117	.229**	-0.07	0.137	-0.044	0.044
CA	0.003	-0.026	0.02	0.068	1	0.131	-0.118	0.147	-0.127	.277**	-.235**	0.137	-0.113	.517**	0.142	-.428**	-.332**
CN	0.038	.319**	.197*	0.032	0.131	1	.450**	-0.029	-0.043	.434**	-0.067	0.074	-0.09	0.079	.303**	-0.155	0.15
CS	.242**	0.032	0.031	-0.069	-0.118	.450**	1	-0.04	-.273**	0.106	-.318**	0.094	-.347**	-.275**	.225**	-.205**	0.003
D	0.094	.194	-0.079	0.096	0.147	-0.029	-0.04	1	.340**	.247**	0.153	.420**	.206*	-0.089	.401**	-0.052	.214**
HR	-.186*	0.14	.309**	0.061	-0.127	-0.043	-.273**	.340**	1	0.154	.499**	.295**	.559**	0.079	.193	.439**	.600**
I	0.011	.509**	.325**	.200*	.277**	.434**	0.106	.247**	0.154	1	0.008	.326**	0.104	-0.019	.491**	-0.16	.171
OD	-0.028	.267**	.172*	.166*	-.235**	-0.067	-.318**	0.153	.499**	0.008	1	.346**	.524**	0.09	0.054	.560**	.382**
O	.164	.525**	.251**	0.117	0.137	0.074	0.094	.420**	.295**	.326**	.346**	1	.367**	-0.013	.343**	.265**	.252**
SM	-.168	0.129	.284**	.229**	-0.113	-0.09	-.347**	.206*	.559**	0.104	.524**	.367**	1	0.056	.167*	.476**	.368**
SD	-.175	-0.128	-0.002	-0.07	.517**	0.079	-.275**	-0.089	0.079	-0.019	0.09	-0.013	0.056	1	-.183*	-0.078	-0.159
TW	0.058	.457**	.365**	0.137	0.142	.303**	.225**	.401**	.193	.491**	0.054	.343**	.167*	-.183*	1	-0.011	.191
TR	-0.034	.193	0.149	-0.044	-.428**	-0.155	-.205*	-0.052	.439**	-0.16	.560**	.265**	.476**	-0.078	-0.011	1	.400**
V	-0.064	.177	.254**	0.044	-.332**	0.15	0.003	.214**	.600**	.171	.382**	.252**	.368**	-0.159	.191	.400**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

8.4.1 Correlations between effective briefing and assertiveness

From the analysis of the results shown in table 8.9, the following picture emerges. There is a small but positive correlations found between assertiveness and construction briefing($r = .064$ $p < .05$). This proves that there is a relationship between the two variables, however the finding also shows a variation from the earlier findings (chapter seven $r = -.54^{**}$), which shows a strong negative correlation's and from other

studies ($r = 0.44$)(Atalah,2009). This variations from $r = 0.064$ may be due to to sample size and possibly errors and in the case of Atalah(2009) may be due to nature and analytical methods. The findings never the less suggests that 0.41% of the variances in respondent's scores on effective construction briefing are explained by assertiveness. Since a statistically significant relationship was not found between effective construction briefing and assertiveness this findings therefore suggests that the proposition that assertiveness is positively related to effective construction briefing be partially supported.

8.4.2 Correlations between effective briefing and communication

From the analysis of the results shown in table 8.9 the following picture emerges. There is a small but negative correlation found between communication and effective briefing ($r = -.037$ $p < .05$). The findings first proves that there exists a relationship between the two variables and suggests that 0.14% of the variance in respondent's scores on effective briefing is explained by communication. This results varies somewhat from the earlier results ($r = -.455$) and this may be due to sample size or minor errors. However it supports the theory that there are linkages between the two variables and though a statistically significant relationship was not found between effective construction briefing and communication, it is suggesting in this case that the proposition that communication is important in every instance for delivering an effective construction briefing process is therefore partially supported. This falls outside the rage of a number of studies which show communication to be more strongly positively related($r = 0.04$). But the fact that our findings show a negative or inverse relation suggests these variables is related by the increase in each variable.

8.4.3 Correlations between effective briefing and competence

The proposition suggests that competence would be positively related to effective construction briefing. From the analysis of the results shown in table 8.9, the following picture emerges. A small but positive correlations was found between competence and effective briefing ($r = .024$ $p < .05$). This proves a relationship exists and that a positive relationship exists. Further this is suggesting 0.06% of the variances in respondent's scores on effective briefing are explained by competence. This finding is slightly different in from the earlier finding but signifies a definite relationship. Statistically a significant relationship was not found between competence and effective construction briefing, but the proposition that competence is essential and positively related to delivering effective briefing is therefore supported.

8.4.4 Correlations between effective briefing and conceptual ability

From the analysis of the results shown in table 8.9, there is an interesting finding. There is a very small, but positive correlations between conceptual ability and effective briefing ($r = .003$ $p < .005$). This proves a relationship exist between the two variables but very little. The findings in this case varies significantly for the earlier findings which showed a strong correlation($r = .400^{**}$). This difference may be due to some error, since other studies also showed a positive correlation in the construction sector($r = 0.37$) (Atalah 2009). This difference may be due to the nature and analytical methods. The finding also showed a very small percentage (0 .0009%) of the variances in respondent's scores on effective briefing are explained by conceptual ability. In this case statistically a significant relationship was not found between effective briefing and conceptual ability. Therefore the proposition that conceptual ability is related to delivering an effective construction briefing process was partially supported.

8.4.5 Correlations between effective briefing and conscientiousness

From the analysis in table 8.9 it is shown that a positive correlation was found between conscientiousness and effective briefing ($r = .038$, $p < .05$). This proves that there is a relationship between the two variables. Further this suggests that 0.14% of the variances in respondent's scores on effective briefing are explained by conscientiousness. This findings varies from the earlier findings ($r = -.652$) and this may be due to sample size, but is within the range of results of other studies ($r = 0.08$) which may be due to the nature and analytical methods used. Though a statistically significant relationship was not found, the finding supports the proposition that conscientiousness would be positively related to effective construction briefing.

8.4.6 Correlations between effective briefing and consideration

The proposition is consideration would be significant related to effective briefing. From the above correlation analysis (table 8.9) it is indicated that consideration formed a positive correlation with effective briefing ($r = .242^{**}$, $p < 0.01$). This proves there is a s relationship between the variables, and further suggests 5.85% of the variances in respondent's scores on effective briefing are explained by consideration. This finding shows similar strong correlation with the earlier findings and suggests a strong relationship. Statistically a significant relationship was found between effective construction briefing and consideration. Therefore the proposition that "consideration" is significantly related to effective construction briefing process was therefore supported.

8.4.7 Correlations between effective briefing and deliberation

The picture which emerges from the above analysis (table 8.9) shows there was

a small positive correlation found between deliberation and effective briefing ($r = .094$, $p < .01$). This proves that there is a relationship between the variables and further suggest 0.88% of the variances in respondent's scores on effective briefing are explained by deliberation. This finding varies from the earlier results but still shows a relationship exist. Statistically a significant relationship was not found between effective briefing and deliberation, but this finding partially supports the proposition that deliberation is related to effective construction briefing process.

8.4.8 Correlations between effective briefing and Human relations

The proposition is human relation would be significantly related to effective briefing. From the above correlation analysis (table 8.9) it is indicate that human relations formed a negative but significant correlation with effective briefing ($r = -.186^*$ $p < 0.05$). This proves that there is a relationship between the variables and further suggests 3.46% of the variances in respondent's scores on effective briefing are explained by consideration. Statistically this indicates a significant relationship was found between effective construction briefing and human relations and therefore the proposition that human relations were significantly related to effective construction briefing process was therefore supported.

8.4.9 Correlations between effective briefing and ideas

From the analysis above (table 8.9) it emerges that a small positive correlation between ideas and effective briefing was found ($r = .011$, $p < 0.001$). This indicates that there exists a relationship between the two variables. This finding is different from the earlier findings ($r = -.275$) which may be due to sample size. This further suggests that 0.0121% of the variances in respondent's scores on effective briefing are explained by ideas. Ideas:- which is about creative thinking generally inspires a search for

information, the briefing process is about searching for information to identify the client requirement. The positive relationship therefore indicates this variable to be likely related to effective briefing. In addition, though a statistically significant relationship was not found between effective briefing and ideas. This finding partially supports the proposition that ideas have an influence the effectiveness of performance ultimately the effectiveness of the process.

8.4.10 Correlations between effective briefing and office details

From the analysis above (table 8.9) an interesting finding emerged. There is a small negative correlation observed between office details and effective briefing ($r = -.028$ $p < .05$). This suggests 0.0784% of the variances in respondent's scores on effective briefing is explained by office details. This proves that there is a relationship between the two variables. This finding is different from the earlier findings ($r = -.533^{**}$) which signifies a strong relationship. The differences may be due to sample size. However is in the range of other studies which found a positive correlation between the two variables ($r = 0.55$) (Atalah 2009). This findings shows also that a statistically significant relationship was not found between effective briefing and office details, however the findings offers support of the proposition that office details is will be positively related to delivering an effective construction briefing process.

8.4.11 Correlations between effective briefing and openness

The above analysis (table 8.9) supports the proposition that openness would be positively related to effective construction briefing. From the correlation analysis it is shown that openness formed a significantly positive correlation with effective briefing ($r = .164^*$, $p < 0.05$). This proves also that there is a relationship between the two variables and also suggests that 2.7% of the variances in respondent's scores on effective briefing

are explained by openness. Statistically a significant relationship was found between effective briefing and openness. This finding significantly supports the proposition. The findings of a positive and significant relationship between openness and effective briefing concur with Barrick and Mount's (1991) results which indicated openness was positively related to manager performance. Similarly the findings concurs with Atalah (2009) findings which indicated that openness was related to the construction management profession performance in decision-making and allows him or her to navigate problematic issue in their roles. Possession of the traits can also be interpreted as the willingness to try different activities and tapping in to your own abilities, while pressing on for a solution in a work context (McCrae & Costa, 1992; Howard & Howard, 1995). From this perspective, the association between openness and effective construction briefing shares similarities with Atalah (2009) Hartman, 2008 and Mastrendrea (1986) findings that the construction manager with this traits is likely to perform well in decision making roles. They generally have integrity and are able to gain the trust of others while demonstrating the capability of keeping ones confidence and interest in mind (Atalah 2009).

8.4.12 Correlations between effective briefing and management

The above analysis (table 8.9) shows that there is a negative but significant correlation was observed between effective briefing and sales-management ($r = -.168^*$, $p < 0.05$). This again proves that there is a relationship between the two variables and also shows that 2.8% of the variances in respondent's scores on effective briefing are explained by sales-management. This finding of a significant relationship between the two variables concur with the studies of Atalah (2009) which indicates management was related to effective outcomes. Possession of the traits can also be interpreted as the ability to co-ordinate teamwork and leading tasks in job situation. Statistically a significant relationship was found between effective briefing and sales-management and

this is likely to suggest significant support for the proposition.

8.4.13 Correlations between effective briefing and self-discipline

The analysis above (table 8.9) showed a negative but significant correlation was observed between effective briefing and self-discipline ($r = -.175^*$, $p < 0.05$). This proves there is a strong relationship between the two variables and also suggests 3.06% of the variances in respondent's scores on effective briefing are explained by self-discipline. This finding support findings from other studies. The findings of a statistically significant relationship between effective briefing and self-discipline further support significantly the proposition.

8.4.14 Correlations between effective briefing and team work

A positive correlation (table 8.9) was observed between effective construction briefing and teamwork ($r = 0.058$, $p < 0.05$). This proves the two variables are related and further this suggests that 0.034% of the variances in respondent's scores on effective briefing are explained by teamwork. The finding of this research varies from the earlier findings and this may be due to once more the sample size or even sample error. Teamwork is rapidly referring to the common good of achieving a task. It is found that teamwork is associated with skills and abilities (Atalah 2009). Possessing this trait an individual is likely to be able to organise team in a common cause. Though statistically a significant relationship was not found between effective briefing and teamwork, these findings support the proposition that teamwork is positively related to effective construction briefing process.

8.4.15 Correlations between effective briefing and trust

From the analysis above (table 8.9) a small negative correlation between effective construction briefing and trust was found ($r = -.034$, $p < 0.05$). This suggests that 0.12% the variances in respondent's scores on effective briefing are explained by trust and proves that a relationship exists between the two variables. The findings vary from the earlier findings but this may be due to sample size. Trust is about integrity and the ability to gain the confidence of team members, which is essential in construction briefing. Possessing this trait an individual is likely to get the best out of a team. Statistically a significant relationship was not found between effective briefing and trust however these findings offers support to the proposition that trust is positively related to effective construction briefing which suggest that the trustworthy is likely to be effective in the process.

8.4.16 Correlations between effective briefing and values

From the analysis above (table 8.9) a small negative correlation was observed between effective construction briefing and values ($r = -.064$, $p < 0.05$). This proves there is a relationship between the two variables and further suggests that 0.41% of the variances in respondent's scores on effective briefing are explained by values. The finding is different from the earlier finding ($r = -.773$) which could be attributed to either sample size or errors. Values are about standard and the readiness to re-examine standards, which are essential in the briefing process. Possessing these traits is likely to induce a self determination to be effective (Bandura 1997). Though statistically a significant relationship was not found between effective construction briefing and values, this findings offers support to the proposition that values will be related to effective construction briefing.

8.5 Analysis of the proposition

While this research discovered relationships between the variables and effective briefing there were several significant correlations detected, in the relationships between specific personality factors and effective construction briefing performance, which are presented below (table 8.10). It is suggested in the proposition that significant correlation would be related to personality relationship and effective performance measures, thereby exerting influence and this was proven in both sets of results.

Table 8.10 Correlation between significant traits dimension

		BE	CS	HR	O	SM	SD
BE	Pearson Correlation	1	.242**	-.186*	.164*	-.168*	-.175*
	Sig. (2-tailed)		.003	.023	.045	.040	.032
	N	150	150	150	150	150	150
CS	Pearson Correlation	.242**	1	-.273**	.094	-.347**	-.275**
	Sig. (2-tailed)	.003		.001	.251	.000	.001
	N	150	150	150	150	150	150
HR	Pearson Correlation	-.186*	-.273**	1	.295**	.559**	.079
	Sig. (2-tailed)	.023	.001		.000	.000	.339
	N	150	150	150	150	150	150
O	Pearson Correlation	.164*	.094	.295**	1	.367**	-.013
	Sig. (2-tailed)	.045	.251	.000		.000	.873
	N	150	150	150	150	150	150
SM	Pearson Correlation	-.168*	-.347**	.559**	.367**	1	.056
	Sig. (2-tailed)	.040	.000	.000	.000		.498
	N	150	150	150	150	150	150
SD	Pearson Correlation	-.175*	-.275**	.079	-.013	.056	1
	Sig. (2-tailed)	.032	.001	.339	.873	.498	
	N	150	150	150	150	150	150

** . Correlation is significant at the 0.01 level (2-tailed).

8.6 Other measures

The correlations between sixteen personality traits and effective performance in construction briefing were the primary elements of this research. However other measures that could potentially influence effective construction briefing performance included experience. This was tested and the results are shown in table 8.11. The findings prove relationships exist.

Table 8.11 Correlations between effective briefing and experience

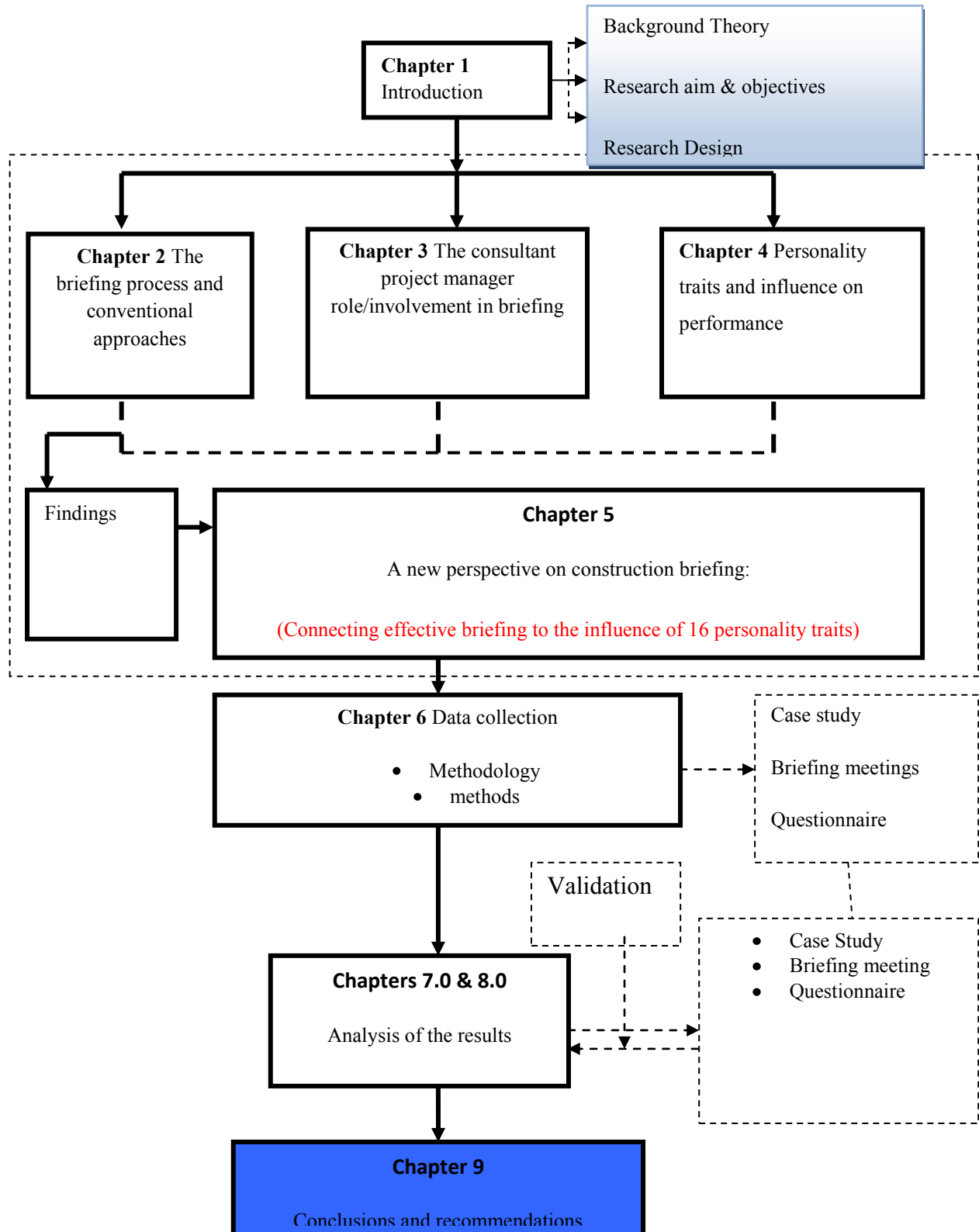
		BE	Years' experience in coordinated briefing
BE	Pearson Correlation	1	.025
	Sig. (2-tailed)		.766
	N	150	150
Years' experience in coordinated briefing	Pearson Correlation	.025	1
	Sig. (2-tailed)	.766	
	N	150	150

When subjected to a correlation analysis a positive correlation was observed between effective construction briefing and experience ($r = 0.025$, $p < 0.05$). This proves a relationship exists between the two variables. Further this suggests that 0.063% of the variances in respondent's scores on effective briefing are explained by teamwork. A statistically significant relationship was not found between effective briefing and

teamwork.

This is particularly interesting since it partially support the concept that experience is one of the main drivers of effective construction briefing process. Overall these (general) findings of significant relationships of positively or negatively relationships supports other studies which suggest relationships between personality and performance. However the significance in the findings is the established (significant or otherwise) relationships between specific personality factors and effective construction briefing. The interesting findings of significant relationships between considerations, human-relations, openness to experience, sales-management, self-disciplines and effective construction briefing supports the concept of two different structures. It also offers further opportunities for further investigation. No other significant findings were noted in the exploration of the data collected. Implications of these findings are discussed in the conclusions chapter.

Chapter 9 Conclusions and Recommendations



9.1 Introduction

The research sets out with the specific aim to evaluate the influence of personality traits on the consultant project manager performance in construction briefing. These aims were translated into linked objectives and refined questions were designed to respond to the aims and objectives.

In the evaluation process sixteen personality traits of the consultant project were analysed for influence on performance. A definition of each of the trait variable and a 16 X 16 correlation matrix enabled the influence of each trait on performance, and the answers to the refined questions to be determined.

This chapter provides evaluation and interpretation of the results obtained for each of the research questions. This will include discussing the generalizability of the research findings, practical implications, limitations, and suggestions for future research.

9.2 Research Question

9.2.1 Question one

The first research question was how current day briefing practice is conducted in the construction industry? This part of the research observed the consultant project managers briefing approaches (in a case study and across other sites), and in the process of observation, questioned them in unstructured interviews. In addition respondent's opinion on their briefing approach was also received from a questionnaire survey of the industry.

This approach confirmed the understanding of how current day briefing practice is

conducted in the industry. It may not represent the general approach of all consultants (project managers), but is indicative of the practice in the real world situation.

The results from the study strongly suggest that current day briefing practice is a personal undertaking of the consultant project manager. Looking for evidence to determine whether current practice is adhering to the best practice guides and recommendation found hardly any, and besides the importance of key criteria such as, understanding the client requirements, and the complexities of the project, ultimately it is personality traits (discovered) which influences strategies. This is despite the fact that there are recommended best practices and guides available. Personality traits influence performance (Barrick and Mount 1991). The understanding of what actually takes place in the industry supports the findings of Barrett and Stanley (1999) who contended that current day briefing practices is of a personal nature, and hardly follow the recommended best practice recommendations and guides.

It is contended that the consultant projects manager generally co-ordinates the process, taking ownership of the process and this involves managing the demand and supply side stakeholders. It is at this stage the sequence of activities was defined, and the essential tasks were organised to support brainstorming the issues in workshops arrangements. The personality theory suggests that in these instances, and at these stages, personality traits tend to impact and influence performance.

Interestingly, the workshops arrangement is generally the accepted approach for brainstorming the client project requirements issues and this is done to initiate interaction, while at the time allowing everyone to be engaged and focused on the issues of clarity, understanding, identifying and defining the project requirements accurately.

The study also found that the workshops general foster a friendly atmosphere and this encouraged greater participation. It helped in the development of several lists of requirements which became the basis for acceptance or rejection. On the part of the client, it was a medium to provide clarity of issues of importance to aid the process.

Significantly, effective communication, a key personality trait, was observed as the essential mechanism for getting across details and receiving feedbacks from client and other stakeholders. The study also confirmed that at the brief hand-over stage personality traits of the consultant project manager were observed, and based on the lexical adjective which equates traits to actions (Goldberg 1991) it was easy to define the consultant project manager actions and observed the impact of the traits on the manner the final brief was handed over to the client. This briefing hand over stage is normally preceded by a signed off phase to indicate official receipt of the final document.

9.2.2 Question two

The second research question was: What are the relationships between sixteen personality traits and effective construction briefing?

This question in the study is essentially to provide evidence of the relationships between sixteen personality traits and performance of the consultant project manager in the briefing process. The pilot study identified sixteen traits associated with the consultant project manager performance.

From the observational and questionnaire survey data, the results in the current study showed that the sixteen traits were evidently observed in the actions of the consultant project managers in the briefing process. These results suggest that the performance of the consultant project manager is influenced by 16 personality traits which contribute to an effective briefing outcome. Importantly the results indicated that each trait (independently) showed a relationship to effective briefing and on the basis of the relationships, a connection was established which impact on performance. Similarly in the wider analysis these traits are inter-related (Appendix G) and interestingly the analysis of the observational data showed more significant correlations than the

questionnaire survey data. This perhaps could have been as a result of the statistical analysis conducted in a typically small to medium sample size, with correlation mainly ranging from medium to large. This distinction between the two sets of results (observational and questionnaire) became apparent during the analysis phases.

However, the analysis showed that there are significant correlations between the traits variables as shown in each analysis and these results support the findings of Atalah(2009; Barrick and Mount.1991) which shows a connection between personality traits and performance, and supports the use of personality traits for evaluating the influence on performance and in particular for identifying individuals suited for specific job.

More importantly, these results add new insights to the literature by not only providing additional support for the use of personality traits for evaluating performance and for selection purposes, but also by providing a specific practical example of using personality traits as an evaluation tool for performance in construction briefing thereby to support effective briefing.

9.2.3 Question Three

The third research question was -How significant are sixteen personality for influencing effective briefing performances of the consultant project manager in construction briefing?

It was proposed that the personality traits which show strong correlations are significant in determining effective performance. If the performance criterion (in this case, briefing task performance stages) were purely contextual in nature, then one would expect to find no differences in correlation among personality traits in other word there may have been equal strengths in correlation.

Results from the current study suggest that there are, from among the 16 traits, factors which shows strong correlation, while other though positively and negatively related, did not show strong relationships $r = .78$, $p < 0.05$; $r = -0.001$, $p < 0.01$). The significance of these correlations highlights the strength of the relationship between the variables and is shown below (questions 4 & 5). The rationale for doing so will be discussed later in the limitation section, but it should be noted that when using (correlations) all 16 traits there were relationships between each with effective briefing as shown in the independent analysis (chapters 7 & 8). It can be argued that all of these factors can be linked to varying level of influence on the task performance stages of briefing.

In general, effectiveness is generally related to openness, management, values, while discipline is more slightly related. It appears the effective consultant project manager is more open, has greater intellect, but there is almost no difference between the two groups at the briefing output levels. This may be because specific task related characteristics that are associated with effectiveness are generally subsumed within the overall outcomes and are therefore measured on this basis. For example, although the communication may be related strongly to output, data gathering is essential in influencing the process.

Although the proposition suggests there are some traits strongly related to output the fact that different factors were more powerful in certain tasks areas gives support to the practice of viewing the strongly related traits to greater effectiveness, though this is not the case in every circumstance?

9.2.4 Questions four and five

The fourth question was: - Which are the dominant traits that are related to effective construction briefing? The fifth research question was: In terms of importance

which are the best predictor of effectiveness?

It was proposed that the significantly correlated traits would better predict the effectiveness of the consultant project manager and ultimately the effectiveness of the briefing process. Results indicated that five traits strongly correlate with effective briefing performance. These are shown by the correlation coefficient values and are shown as follows: {(CS) $r = .242^{**}$; (HR) $r = -.186^{*}$; (SD) $r = -.175^{*}$; (SM) $r = -.168^{*}$; (O) $r = .164^{*}$ }. Statistically these traits showed strong relationships at ($p < 0.05$). The fact that all were statistically significant at the $p < .05$ indicates a strong relationship with performance and the nature of influence on performance. It therefore suggests that the consultant project manager with these traits is strongly likely to deliver an effective process.

These results support Ashton's (1998) findings which suggests that statistically strong correlations are good predictors of relationships. The results also support the findings of Atalah(2009) statements regarding how having the right personality traits an individual should be able to navigate decision-making issues with maximal validity. Most researchers would probably argue that when performance is defined by personality trait construct it would be considered essential to highlight the job criterion, which are what the current study highlights. This study was very specific on personality trait influence in construction briefing relating to the consultant project manager performance. Therefore, in this case, task performance areas can be considered a more specific criterion, which suggests that these results are congruent with Atalah(2009) statement. The results give support to the proposition that the strong related personality traits are likely to be better predictors of effectiveness in specific performance setting.

A few striking observations made from the analysis are as follows, of the forty seven traits associated with the construction management professional sixteen are closely related to the consultant project manager performance in construction briefing.

These traits are likely to enable the CPM to extract an effective briefing process. It would appear that the traits listed above induce a strong relationship thereby indicating the sixteen traits can therefore be arranged hierarchally to indicate degree of influence. Further all sixteen traits do indeed appear to exhibit a relationship with the effectiveness of the consultant project manager construction briefing.

This study identifies the personality traits associated with the consultant project manager in the briefing process and informs of their importance, which is measured in accordance with the views of the industry professionals. The findings of this research support the conclusions of Atalah (2009); Hartman (2008) and Barrick and Mount (1991) in terms of personality traits influence on performance. It adds to the work of Atalah(2009) in a number of ways , for example, Atalah(2009) and Hartman(2008) found that there are relationships between forty seven personality traits of construction management professional and performance in decision-making role in construction.

This study found that there are sixteen personality traits from the list of forty seven, which directly impacts performance, and whereas Atalah(2009) and Hartman (2008) found forty-seven related to the construction management professional, this research established the relationships between sixteen personality traits of the consultant project manager and performance in the briefing process and likewise established influence on performance.

In particular the former reflects the fact that the personality traits list develops impacts on the construction management professional's performance. The latter suggest identified sixteen traits from the list which are related to the consultant project manager, specifically relating to performance in the briefing process.

The findings were able to validate personality influence on performance in the construction sector and then narrowing it down to sixteen to the consultant project manager, highlighting impact on delivering an effective briefing process.

These findings also present the answers to question five by highlighting the personality traits factors which are the best predictors of effective briefing performance. The extent to which each factor should be taken into consideration for relationships is for further examination as expanded in recommendation for further research.

9.3 Limitations

The first and most obvious limitation of the current study is the small sample size observed. This is an excellent example of one of the enormous hurdles researchers have to put up with in attempting to evaluate the influence of personality traits on performance of the consultant project manager in construction briefing and having to observe the incidents first hand. The research aimed to gather a large sample, but this proved challenging, eventually it was very difficult to gather enough data to give a greater validation of the instruments in natural settings because there are not a lot of consultant project manager conducting briefing in that setting at the time of the study.. For example, the current data was collected over ten month period and there were still only four consultant project managers who were conducting client briefing during the time of the research. In addition the data collected were subjective and are likely to have some amount of errors not readily obvious to the eyes. This is likely the reason why the correlations between effective briefing and personality from the cases observed and the questionnaire did not show similarly correlated coefficients (values) in the current study. However, since the focus of the study was on relationships between personality and performance and the data was analysed using the Pearson- coefficient method, relationships were established, however the results need to be interpreted with caution due to these issues mentioned, especially sample size. This issue is frequently encountered and makes running validity studies for evaluating personality trait influence on performance with few personnel fairly difficult. Another limitation to the current study is the task performance (criterion) variable. Although the consultant

project managers were observed conducting these tasks during the briefing in an apparently structured manner allowing the observation to be carried out, these variable may not have been precisely defined. In other word there were overlapping of tasks and so it was possible to rate a particular variable several time or similarly missed some action to equate with the corresponding trait.

Simply put there could also be a wide range of counter-productive actions that could technically lead to unexpected oversights and the action, though key, could have been unavailable for the current study. It seems that if there were more behaviourally-based exercises and there were deliberate pauses to ensure the measure of performance is noted then it could have been likely that the personality variables from the sixteen traits factors could have more accurately evaluate the influence on performance. This highlights another practical implication of this study. The consultant project managers who were observed and rated in this study behaved in a manner that their action were constantly developing and changing over time and so the recording of the action to place against a specific trait to aid rating was slightly inconsistent. This was expected as the research literature indicted the potential for such variations to occur, because it is individual involved in the process. When the data was examined there were indication of these variations and even evident in variability between the different observer's data collected and rated. For example, some of the scoring and rating sheets were completely ticked with detailed explanations, while others simply had rating scores (tick) only. There were instances when it was difficulty in determining the data gathering stages, from analysing, synthesising stages. Communication was easily recognised because it was action oriented, either talking, or action sending mails and presentations and formed the pivot of the process. In fact communication was throughout the process. These were difficult over a long time period of concentration to accumulate the scores needed for validation. And though the traits definition were available before hand to develop some familiarity and for awareness, the identification of the traits to match the action of the consultant project manager performance may have often been operationally defined by mistaken variables and this may have contributed to a far more

subjective reality. These were some of the difficulties. Therefore, the generalizability of these results to other studies that used instruments that were developed based on observational and self-rate data should be done with caution. Also, the fact that not in every instance the relationship was strong limits the practical implications of these findings. This suggests that there was too strong variability between trait influences for some of the traits.

9.4 Implications for Future Research

The results of the current study support evaluating the influence of personality traits on the performance of the consultant project manager for selecting to deliver effective briefing. It provides further evidence of the importance of making the job-performance connection at the engagement stage and that the possession of the sixteen traits appears to be powerful predictors of briefing success. The extent to which each of the traits should be taken into consideration for defining relationships provides room for further research. In addition, the results from the current study suggest that additional research should be conducted in using personality trait measures to predict performance in construction briefing. Current findings also suggest that additional research needs to be conducted specifically to be able to identify beforehand the consultant project manager who will most likely possess the traits which influence effectiveness in identifying the client requirements.

It is possible that if the consultant project manager with the personality traits which contribute to delivering effective briefing process could have been controlled in the current study, then perhaps the correlation from the sixteen traits and effective briefing performance could have been even more powerful predictors as Atalah(2009) and Hartman,(2008) found.

There has been a recent effort in personality research to conduct trait assessment

measures on several individuals in various job situations, including construction management personnel, so that the traits scales could factor into the actual Big Five model (Goldberg 1999). Perhaps it would be beneficial to conduct this research with this type of data so that a more direct comparison to the Big Five body of research can be made. This would allow the current results to be compared to a body of work generally accepted as the global standard (though there are recommendations to go beyond this standard, as this study did) as such this would be a logical next step for this study. Finally personality traits influence on performance need to be further researched. The results of this study suggest that the client approach to engaging consultant project manager, which is generally based on bids, interviews, recommendations, though deliver benefits, should focus on personality constructs. Hartman (2008) appear to be suggesting that these types of evaluations are common when evaluating candidates for delivering exceptional performance, but there is limited empirical evidence that personality tests is used in this manner.

In summary, the research findings suggest that the 16 personality traits are related to the consultant project manager's performance in construction briefing, with varying levels of significance, and therefore influence their approaches. They appear to be valid instruments for predicting effective performance in construction briefing. The research adds support for investigating the personal dimension for improving the effectiveness of construction briefing. Results also call for further investigation into the use of direct observational based approach such as the approach used in this study.

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Appendix A

Survey Cover Letter and follow up Questionnaire

December, 2008

Dear Sir/Madam,

Following our brief discussion I wish to inform you that i am a research student in the School of the Built Environment at Herriot -Watt University conducting research under the supervision of Dr Graeme Bowles and Dr Scott Fernie. I am researching the briefing process in the UK construction sector: evaluating the influence of the consultant project manager (CPM) personality traits on the process. The School funds the study.

Personality trait research has shown that consultant project managers perform differently because of trait influences. It is the traits which influence performance I am interested in to develop a hierarchy of the CPM most effective and influential traits on the briefing process. As such a new perspective will be advanced to the knowledge base of the industry.

There are two phases to this project, a case study and a questionnaire survey. However before I refine my final questionnaire I am attempting to establish a list of trait from the list of forty-seven in the attached list most likely to influence the consultant project manager performance in delivering an effective briefing process. I would appreciate if you would kindly devote a few minutes to completing the attached, brief questionnaire and return it in the prepaid self-addressed envelope provided.

The data collected through this study will be kept for a period in a secured location at the school. I would also like to assure you that this study has been reviewed and received ethics clearances through the office of research ethics at Heriot-Watt University.

Thanks in advance for your co-operation.

Yours sincerely

Rudolph Prince

Research Student

Appendix B

Survey Instruments

Questionnaire- Personality Traits identification

This questionnaire forms part of our discussion on the traits of the consultant project manager project that influence performance in the briefing process.

Please respond to the following questions by either ticking the appropriate box (es) or by writing your answer in the space provided.

SECTION A Background Information

1 Which of the following best describe your organisation/consultancy?

- ☐ Project Management
- ☐ Management Consultancy
- ☐ Construction & Quantity Surveying
- ☐ Facilities Management
- ☐ Other, please specify _____

2 Your position within the organisation

- ☐ Project manager
- ☐ Contract manager
- ☐ Project co-ordinator

☐ Project Engineer

☐ Other, please specify _____

3 Your experience of briefing in past 4 years (measured by number of projects)

Co-ordinated /Written (proceed to Q 8) ☐

Contributed only; did not write (proceed to Q 9) ☐

4 Please indicate your gender

Male ☐


Female ☐

SECTION B – Trait influences on performance in construction briefing.

5. In your experience;

(c) Please review the list of personality traits and kindly tick the traits that describe you , then,

(d) On a scale of 1 to 10 (*1 being to a low degree, and 10 to a very high degree*), *please* circle the number indicating the extent to which each trait (identified) is important and influences your effectiveness.

No	Trait 10	Trait Description	Box	Rating Scale 1 
1	Achievement striving	Aspiration Levels.		1 2 3 4 5 6 7 8 9 10
2	Activity	Rapid tempo and vigorous movement.		1 2 3 4 5 6 7 8 9 10
3	Agreeableness	Altruism.		1 2 3 4 5 6 7 8 9 10
4	Altruism	Active concern for others.		1 2 3 4 5 6 7 8 9 10
5	Angry hostility	Tendency to experience anger and frustration.		1 2 3 4 5 6 7 8 9 10
6	Art	Interest in activities that make beauty.		1 2 3 4 5 6 7 8 9 10
7	Assertiveness	Dominance, forceful, and social ascendancy.		1 2 3 4 5 6 7 8 9 10
8	Communications	Interest in using language, either writing or speaking.		1 2 3 4 5 6 7 8 9 10
9	Competence	The sense that one is capable, sensible, prudent, and effective.		1 2 3 4 5 6 7 8 9 10
10	Compliance	Deference to others in reaction to interpersonal conflict.		1 2 3 4 5 6 7 8 9 10
11	Computations	Interest in activities that use numbers.		1 2 3 4 5 6 7 8 9 10
12	Conceptual ability	Ability to learn job requirements		1 2 3 4 5 6 7 8 9 10

		within a reasonable time.		
13	Conscientiousness	Planning, organising, and carrying out tasks.		1 2 3 4 5 6 7 8 9 10
14	Consideration	Ability to develop job relationships with subordinates, characterized by mutual trust, respect, consideration, and warmth.		1 2 3 4 5 6 7 8 9 10
15	Deliberation	The tendency to think carefully before acting.		1 2 3 4 5 6 7 8 9 10
16	Dutifulness	Adherence to ethical principles and moral obligations.		1 2 3 4 5 6 7 8 9 10
17	Employee	Attitude toward the subordinates: knowing of their motivations and needs.		1 2 3 4 5 6 7 8 9 10
18	Excitement-seeking	Craving for excitement and stimulation.		1 2 3 4 5 6 7 8 9 10
19	Extraversion	Outgoingness.		1 2 3 4 5 6 7 8 9 10
20	Fantasy	Openness to fantasy.		1 2 3 4 5 6 7 8 9 10
21	Feelings	Openness to one's own inner feelings and emotions.		1 2 3 4 5 6 7 8 9 10
22	Gregariousness	Preference for other people's company.		1 2 3 4 5 6 7 8 9 10
23	How supervise	Supervisor's knowledge and insight concerning human relations in industry.		1 2 3 4 5 6 7 8 9 10

24	Human relations	Supervisor's techniques to handle problems, lateness, apathy, arguments.		1 2 3 4 5 6 7 8 9 10
25	Human services	Interest in helping other people.		1 2 3 4 5 6 7 8 9 10
26	Ideas	Intellectual curiosity.		1 2 3 4 5 6 7 8 9 10
27	Impulsiveness	Inability to control cravings and urges.		1 2 3 4 5 6 7 8 9 10
28	Management	Feeling toward top management, pay, company policy, benefits, plant regulations, and other aspects over which the supervisor has little control.		1 2 3 4 5 6 7 8 9 10
29	Mechanical	Interest in knowing how things work and using tools to make or repair things.		1 2 3 4 5 6 7 8 9 10
30	Nature	Interest in outdoor activities, such as growing or caring for plants or animals.		1 2 3 4 5 6 7 8 9 10
31	Office details	Interest in keeping tract of things, people, or information.		1 2 3 4 5 6 7 8 9 10
32	Openness	Willingness to try different activities.		1 2 3 4 5 6 7 8 9 10
33	Order	Characteristics of organisation.		1 2 3 4 5 6 7 8 9 10
34	Positive emotions	Tendency to experience positive emotions.		1 2 3 4 5 6 7 8 9 10
35	Sales/Management	Interest in dealing with people, such as leading a team of		1 2 3 4 5 6 7 8 9 10

		workers or selling ideas.		
36	Science/Technical	Interest in discovering or understanding the natural or physical world.		1 2 3 4 5 6 7 8 9 10
37	Self-discipline	The ability to begin tasks and carry them through to completion.		1 2 3 4 5 6 7 8 9 10
38	Straightforwardness	Frankness, sincerity, and ingenuousness.		1 2 3 4 5 6 7 8 9 10
39	Structure	Ability to define a person's own role and those of subordinates to achieve goal.		1 2 3 4 5 6 7 8 9 10
40	Supervision	Attitude toward the duties and responsibilities of a supervisor; a person's annoyances, desires, and needs; feelings toward other supervisors.		1 2 3 4 5 6 7 8 9 10
41	Teamwork-KSA	Knowledge, skills, and abilities (KSAs) that predict ability to work in teams.		1 2 3 4 5 6 7 8 9 10
42	Tender-mindedness	Attitudes of sympathy and concern for others.		1 2 3 4 5 6 7 8 9 10
43	Total score	Individual's attitude about being a supervisor.		1 2 3 4 5 6 7 8 9 10
44	Trust	Disposition to believe that others are honest and well intentioned.		1 2 3 4 5 6 7 8 9 10
45	Values	Readiness to re-examine values.		1 2 3 4 5 6 7 8 9 10

46	Vulnerability	Vulnerability to stress.		1 2 3 4 5 6 7 8 9 10
47	Warmth	Issues of interpersonal intimacy.		1 2 3 4 5 6 7 8 9 10

Thank you very much for your kind contribution

Appendix C

Survey Cover Letter and Questionnaire

March, 2009

Dear Sir/Madam,

I am a research student in the School of the Built Environment at Herriot -Watt University conducting research under the supervision of Dr Graeme Bowles and Dr Scott Fernie. I am researching the briefing process in the UK construction sector: evaluating the influence of the consultant project manager (CPM) personality traits on the process. The School funds the study.

Personality trait research has shown that consultant project managers perform differently because of trait influences. It is the traits which influence performance I am interested in to develop a hierarchy of the CPM most effective and influential traits on the briefing process. As such a new perspective will be advanced to the knowledge base of the industry.

There are two phases to this project, a case study and a questionnaire survey. In the questionnaire phase I have randomly selected organisations in the UK construction sector and have sent each of these organisations the enclosed questionnaire. Your organisation is one of those selected and I would appreciate if you would kindly devote a few minutes to completing the attached, brief questionnaire and return it in the prepaid self-addressed envelope provided.

Please be assured that the information provided will be kept confidential and no firm, organisation or individual will be identified in the thesis or in any report or publication based on this research. The data collected through this study will be kept for a period in a secured location at the school. A copy of the summary report will be made available if

required.

I would also like to assure you that this study has been reviewed and received ethics clearances through the office of research ethics at Heriot-Watt University.

Thanks in advance for your co-operation.

Yours sincerely

Rudolph Prince

Research Student

Appendix D

Survey Instrument

Questionnaire - Construction project briefing and personality traits influence on the process

The briefing process is the first and most important step in the construction cycle, where clients, consultants and other stakeholders interact at the conceptual stage of a project to identify and define the client requirements. It involves gathering, analysing and synthesising information for the development of the brief which informs decision-making and decision-implementation at the strategic and project planning stage of the development process (Yu *et al*, 2008).

This questionnaire forms part of a research project which studies the briefing process to evaluate the influence of the consultant (project manager) personality traits in delivering an effective briefing process.

With reference to your previous experience in the briefing process on a project, please respond to the following questions by either ticking the appropriate box (s) or by writing your answer in the space provided. All information provided would be treated in the strictest of confidence.

SECTION A – Background information

1. Which of the following best describe your organisation?

- ☐ Project Management Consultant
- ☐ Project Developer

- ☐ Multi-disciplinary Practice
- ☐ General Contractor
- ☐ Other, please specify _____

2. What is your position within the organisation?

- ☐ Project manager
- ☐ Contract manager
- ☐ Project co-ordinator
- ☐ Project Engineer
- ☐ Other, please specify _____

3 What is your role in the project?

- ☐ Project Manager
- ☐ Consultant (Project Manager)
- ☐ Contract manager
- ☐ Architect
- ☐ Engineer
- ☐ Other, please specify _____

4 Project Title: _____

5 In which sector is the client of the project?

☐ Public

Please specify _____

☐ Private

Please specify _____

6 Please indicate the size of the client organisation

Number of employees ☐ 1- 10 ☐ 11-50 ☐ 51 - 150 ☐ 151+

7 Please indicate years of experience in briefing

Less than 5 years ☐

5 to 10 years ☐

10 to 15 years ☐

15 to 20 years ☐

Over 20 years ☐

8 Please indicate which age group best describe yourself

18 to 30 ☐

31 to 50 ☐

51 to 70 ☐

Over 70 ☐

9 Your sex?

Male

☐

Female

☐

SECTION B – Your perception (views) of the briefing process

10. Which of the following statement best describes the briefing practice?

☐

Have an established way for briefing all projects

☐

Follow the established procedures for briefing used with different projects

☐

Have no established procedure for briefing; in each project briefing is carried out as seems appropriate.

☐

Begins the process with brainstorming sessions to identify the specific project requirements

☐

Other, Please specify _____

Section C

11. In your experience, to what extent are the following used to convey the client's requirements to the design team?

Never

Always Frequently 50% of cases Infrequently

Minutes of (workshop) meetings ☐ ☐ ☐ ☐ ☐

Full Functional specification ☐ ☐ ☐ ☐ ☐

Other, please specify ☐ ☐ ☐ ☐ ☐

12 Briefing variables

Please indicate your level of agreement/disagreement for each of the following statement

	Strongly	Agree	Neutral	Disagree	Strongly
a) The brief should act as a reference document that should be available to all project parties.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Briefing is a facilitated meeting that inputs the requirements of the client and other stakeholders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Briefing is the integration of the skills, knowledge and experience of different stakeholders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(d) Personalities, culture and ethics influence decision ☐ ☐ ☐ ☐ ☐

making in the briefing process.

☐ ☐ ☐ ☐ ☐

e) Other, please specify _____

13. To what extent was the concept brief altered during the construction phase of the project?

☐ Not significantly

☐ Significantly

☐ In a very significant way

Other, please specify _____

SECTION D – Personality trait influence on construction briefing

[Personality traits are pervasive styles of thinking, feeling, and behaving, and as such they are likely to affect vocational interests and choices, work styles (Hoekstra, 1993), job satisfaction, and effectiveness of job performance (Costa, 1996)]

14 From your experience, please express your opinion on how important is each trait to influencing the effectiveness of the briefing process?

Traits influencing performance	Of great importance	Of some importance	Of no importance
Assertiveness			
Communication			
Competence			
Conceptual ability			
Conscientiousness			
Consideration			
Deliberation			
Human relations			
Ideas			
Office details			

Openness			
Management			
Self discipline			
Teamwork			
Trust			
Values			

15. On a scale of 1 to 10 (1 being to a low degree, and 10 to a very high degree), please rate the impact of each trait on influencing the effectiveness of the briefing process?

Traits	1 ← → 10
1 Assertiveness	1 2 3 4 5 6 7 8 9 10
2. Communication	1 2 3 4 5 6 7 8 9 10
3. Competence	1 2 3 4 5 6 7 8 9 10
4. Conceptual ability	1 2 3 4 5 6 7 8 9 10

5 Conscientiousness	1 2 3 4 5 6 7 8 9 10
6. Consideration	1 2 3 4 5 6 7 8 9 10
7 Deliberation	1 2 3 4 5 6 7 8 9 10
8 Human relation	1 2 3 4 5 6 7 8 9 10
9 Ideas	1 2 3 4 5 6 7 8 9 10
10 Office details	1 2 3 4 5 6 7 8 9 10
11. Openness	1 2 3 4 5 6 7 8 9 10
12. Management	1 2 3 4 5 6 7 8 9 10
13. Self discipline	1 2 3 4 5 6 7 8 9 10
14. Teamwork	1 2 3 4 5 6 7 8 9 10
15. Trust	1 2 3 4 5 6 7 8 9 10
16. Values	1 2 3 4 5 6 7 8 9 10

16 The table below shows the briefing process as a segmented information process. Please identify the traits you believe most influential in each segment.

BRIEFING SEGMENTATION						
Traits	Initiation	Exploration	Identification	Clarity	Formulation	Communication
1 Assertiveness						
2 Communication						
3 Competence						
4 Conceptual ability						
5 Conscientiousness						
6 Consideration						
7 Deliberation						
8 Human relation						
9 Ideas						
10 Office details						
11 Openness						
12 Management						
13 Self discipline						
14 Teamwork						
15 Trust						
16 Values						

17 On a scale of 1 to 10 (10 very well) please give rate how effective was the briefing process.

Final brief 1 2 3 4 5 6 7 8 9 10

Please provide the following information to ensure a copy of the final report is sent to you:

Name:	Position:
_____	_____
Organisation: _____	

End of Questionnaire

Thank you very much for your kind contribution

Important reminder: Please return the completed questionnaires in the self addressed envelope provided.

Appendix E

Survey Instruments- Unstructured interview

Research Questions: How does the consultant project manager conduct the briefing process?

Interview Question: What process was used to select the procedure used for conducting the briefing process?

Research Question: Do personality traits influence the performance of the consultant project manager performance in the briefing process?

Interview Questions: How do you know if personality traits are related to your performance?

Research Question: What are the dominant traits related to your performance?

Interview Question: How important do you rate the influence of each personality traits on your performance in the briefing process?

Appendix F

Sixteen traits identification

Descriptive Statistics			
Variables	Mean		Std. Deviation
	Statistic	Std. Error	Statistic
CP	8.5667	.07709	.94419
CN	8.5000	.08068	.98819
CM	8.4733	.06601	.80848
I	8.2000	.11624	1.42367
D	8.1867	.09711	1.18936
TW	7.7400	.15671	1.91928
A	7.6267	.13396	1.64070
CS	7.5800	.12876	1.57697
CA	7.5133	.21752	2.66405
O	7.3867	.13404	1.64168
SM	6.3933	.14560	1.78321
TR	6.3400	.14527	1.77919
V	6.3133	.13615	1.66744
OD	6.3000	.15217	1.86364
SD	6.2200	.17103	2.09464
HR	6.0800	.15414	1.88786
Structure	5.7533	.17235	2.11081
Dutifulness	5.6467	.21636	2.64990
Tender-mindedness	5.6333	.15813	1.93664
Straightforwardness	5.3600	.20096	2.46119
Employee	5.3267	.15899	1.94728
Agreeableness	5.3000	.23908	2.92811
Achievement striving	5.1733	.20934	2.56394
Human services	5.0133	.21675	2.65458
Order	4.9000	.20481	2.50838
Altruism	4.7667	.22731	2.78398

Extraversion	4.7600	.23832	2.91877
Feelings	4.7400	.17734	2.17191
Warmth	4.6733	.15758	1.92997
Supervision	4.6667	.20457	2.50547
How supervise	4.5200	.20654	2.52961
Science/Technical	4.2400	.21689	2.65633
Compliance	2.9800	.19512	2.38977
Computations	1.7800	.19384	2.37399
Art	1.4200	.20184	2.47205
Positive emotions	1.3933	.21171	2.59296
Total score	1.3933	.20744	2.54067
Vulnerability	1.3133	.18540	2.27073
Activity	1.2733	.19058	2.33415
Mechanical	1.2467	.19751	2.41899
Management	1.1133	.17584	2.15362
Excitement-seeking	1.0667	.17460	2.13839
Nature	.9933	.17710	2.16902
Gregariousness	.9667	.16396	2.00809
Angry hostility	.9000	.12996	1.59172
Fantasy	.8733	.14072	1.72349
Impulsiveness	.7133	.12633	1.54718
Valid N (listwise)			

Appendix G

Cases and Questionnaire survey

Analysis of the traits variables in the case study

		Correlations					
Variables		BE	A	CM	CP	CA	CN
BE	Pearson Correlation	1	-.548**	-.455**	-.130	-.400*	-.652**
	Sig. (2-tailed)		.000	.003	.425	.011	.000
	N	40	40	40	40	40	40
A	Pearson Correlation	-.548**	1	.184	-.073	.497**	.548**
	Sig. (2-tailed)	.000		.255	.655	.001	.000
	N	40	40	40	40	40	40
CM	Pearson Correlation	-.455**	.184	1	.101	.325*	.395*
	Sig. (2-tailed)	.003	.255		.537	.041	.012
	N	40	40	40	40	40	40
CP	Pearson Correlation	-.130	-.073	.101	1	.152	.157
	Sig. (2-tailed)	.425	.655	.537		.348	.333
	N	40	40	40	40	40	40
CA	Pearson Correlation	-.400*	.497**	.325*	.152	1	.484**
	Sig. (2-tailed)	.011	.001	.041	.348		.002
	N	40	40	40	40	40	40
CN	Pearson Correlation	-.652**	.548**	.395*	.157	.484**	1
	Sig. (2-tailed)	.000	.000	.012	.333	.002	
	N	40	40	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).(p<0.01)

* . Correlation is significant at the 0.05 level (2-tailed).(p<0.05)

Analysis of the traits variables in the case study

		Correlations					
Variables		BE	CS	D	HR	I	OD
BE	Pearson Correlation	1	-.486**	-.654**	-.340*	-.275	-.533**
	Sig. (2-tailed)		.001	.000	.032	.086	.000
	N	40	40	40	40	40	40
CS	Pearson Correlation	-.486**	1	.469**	.450**	.339*	.319*
	Sig. (2-tailed)	.001		.002	.004	.032	.045
	N	40	40	40	40	40	40
D	Pearson Correlation	-.654**	.469**	1	.449**	.500**	.668**
	Sig. (2-tailed)	.000	.002		.004	.001	.000
	N	40	40	40	40	40	40
HR	Pearson Correlation	-.340*	.450**	.449**	1	.263	.304
	Sig. (2-tailed)	.032	.004	.004		.102	.057
	N	40	40	40	40	40	40
I	Pearson Correlation	-.275	.339*	.500**	.263	1	.534**
	Sig. (2-tailed)	.086	.032	.001	.102		.000
	N	40	40	40	40	40	40
OD	Pearson Correlation	-.533**	.319*	.668**	.304	.534**	1
	Sig. (2-tailed)	.000	.045	.000	.057	.000	
	N	40	40	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).(p<0.01)(p<0.01)

* . Correlation is significant at the 0.05 level (2-tailed).(p<0.05)(p<0.05)

Analysis of the traits variables in the case study

		Correlations			
Variables		BE	O	SM	SD
BE	Pearson Correlation	1	.034	-.213	-.230
	Sig. (2-tailed)		.837	.186	.154
	N	40	40	40	40
O	Pearson Correlation	.034	1	.079	.244
	Sig. (2-tailed)	.837		.629	.129
	N	40	40	40	40
SM	Pearson Correlation	-.213	.079	1	.403*
	Sig. (2-tailed)	.186	.629		.010
	N	40	40	40	40
SD	Pearson Correlation	-.230	.244	.403*	1
	Sig. (2-tailed)	.154	.129	.010	
	N	40	40	40	40

*. Correlation is significant at the 0.05 level (2-tailed).(P<0.05)

Analysis of the traits variables in the case study

		Correlations			
Variables		BE	TW	TR	V
BE	Pearson Correlation	1	-.474**	-.696**	-.773**
	Sig. (2-tailed)		.002	.000	.000
	N	40	40	40	40
TW	Pearson Correlation	-.474**	1	.686**	.644**
	Sig. (2-tailed)	.002		.000	.000
	N	40	40	40	40
TR	Pearson Correlation	-.696**	.686**	1	.904**
	Sig. (2-tailed)	.000	.000		.000
	N	40	40	40	40
V	Pearson Correlation	-.773**	.644**	.904**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	40	40	40	40

** . Correlation is significant at the 0.01 level (2-tailed).(p<0.01)

Descriptive and statistical analysis of the traits variables in the Questionnaire survey

Descriptive Statistics			
Var.	Mean	Std. Deviation	N
BE	8.0000	.89742	150
A	7.6267	1.64070	150
CM	8.4733	.80848	150
CP	8.5667	.94419	150
CA	7.5133	2.66405	150
CN	8.5000	.98819	150

		Correlations					
Variables		BE	A	CM	CP	CA	CN
BE	Pearson Correlation	1	.064	-.037	.024	.003	.038
	Sig. (2-tailed)		.438	.653	.773	.973	.646
A	Pearson Correlation	.064	1	.336**	.016	-.026	.319**
	Sig. (2-tailed)	.438		.000	.844	.748	.000
CM	Pearson Correlation	-.037	.336**	1	.262**	.020	.197*
	Sig. (2-tailed)	.653	.000		.001	.804	.015
CP	Pearson Correlation	.024	.016	.262**	1	.068	.032
	Sig. (2-tailed)	.773	.844	.001		.411	.694
CA	Pearson Correlation	.003	-.026	.020	.068	1	.131
	Sig. (2-tailed)	.973	.748	.804	.411		.109
CN	Pearson Correlation	.038	.319**	.197*	.032	.131	1
	Sig. (2-tailed)	.646	.000	.015	.694	.109	

** . Correlation is significant at the 0.01 level (2-tailed).(p<0.01)

* . Correlation is significant at the 0.05 level (2-tailed).(p<0.05)

N=150

Descriptive and statistical analysis of the traits variables in the Questionnaire survey

Descriptive Statistics			
Var.	Mean	Std. Deviation	N
BE	8.0000	.89742	150
CS	7.5800	1.57697	150
D	8.1867	1.18936	150
HR	6.0800	1.88786	150
I	8.2000	1.42367	150
OD	6.3000	1.86364	150

Correlations							
Variables		BE	CS	D	HR	I	OD
BE	Pearson Correlation	1	.242**	.094	-.186*	.011	-.028
	Sig. (2-tailed)		.003	.251	.023	.898	.733
CS	Pearson Correlation	.242**	1	-.040	-.273**	.106	-.318**
	Sig. (2-tailed)	.003		.625	.001	.195	.000
D	Pearson Correlation	.094	-.040	1	.340**	.247**	.153
	Sig. (2-tailed)	.251	.625		.000	.002	.061
HR	Pearson Correlation	-.186*	-.273**	.340**	1	.154	.499**
	Sig. (2-tailed)	.023	.001	.000		.060	.000
I	Pearson Correlation	.011	.106	.247**	.154	1	.008
	Sig. (2-tailed)	.898	.195	.002	.060		.927
OD	Pearson Correlation	-.028	-.318**	.153	.499**	.008	1
	Sig. (2-tailed)	.733	.000	.061	.000	.927	

** . Correlation is significant at the 0.01 level (2-tailed).(p<0.01)

* . Correlation is significant at the 0.05 level (2-tailed).(p<0.05)

N=150

Descriptive and statistical analysis of the traits variables in the Questionnaire survey

Descriptive Statistics			
Var.	Mean	Std. Deviation	N
BE	8.0000	.89742	150
O	7.3867	1.64168	150
SM	6.3933	1.78321	150
SD	6.2200	2.09464	150
TW	7.7400	1.91928	150
TR	6.3400	1.77919	150
V	5.7533	2.11081	150

Correlations

Variables		BE	O	SM	SD
BE	Pearson Correlation	1	.164 [*]	-.168 [*]	-.175 [*]
	Sig. (2-tailed)		.045	.040	.032
	N	150	150	150	150
O	Pearson Correlation	.164 [*]	1	.367 ^{**}	-.013
	Sig. (2-tailed)	.045		.000	.873
	N	150	150	150	150
SM	Pearson Correlation	-.168 [*]	.367 ^{**}	1	.056
	Sig. (2-tailed)	.040	.000		.498
	N	150	150	150	150
SD	Pearson Correlation	-.175 [*]	-.013	.056	1
	Sig. (2-tailed)	.032	.873	.498	
	N	150	150	150	150

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Descriptive and statistical analysis of the traits variables in the Questionnaire survey

Correlations		BE	TW	TR	V
Variables					
BE	Pearson Correlation	1	.058	-.034	-.064
	Sig. (2-tailed)		.477	.683	.438
	N	150	150	150	150
TW	Pearson Correlation	.058	1	-.011	.191 [*]
	Sig. (2-tailed)	.477		.891	.019
	N	150	150	150	150
TR	Pearson Correlation	-.034	-.011	1	.400 ^{**}
	Sig. (2-tailed)	.683	.891		.000
	N	150	150	150	150
V	Pearson Correlation	-.064	.191 [*]	.400 ^{**}	1
	Sig. (2-tailed)	.438	.019	.000	
	N	150	150	150	150

*. Correlation is significant at the 0.05 level (2-tailed).(p<0.05)

**. Correlation is significant at the 0.01 level (2-tailed).(p<0.01)

